

THE REPORT
OF THE
PRESIDENT
OF
QUEEN'S COLLEGE, CORK,
FOR
THE ACADEMIC SESSION 1877-8;
WITH APPENDICES.

Presented to both Houses of Parliament by Command of Her Majesty.



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TO THE QUEEN'S MOST EXCELLENT MAJESTY.

MAY IT PLEASE YOUR MAJESTY—

I have the honour of submitting to Your Majesty the following Report on Queen's College, Cork, for the Academic Session, 1877-78.

I. ENTRANCE EXAMINATION, TOTAL NUMBER OF STUDENTS, AND THEIR CLASSIFICATION ACCORDING TO ACADEMIC STANDING AND FACULTIES.

At the Entrance Examination held on Tuesday, the 16th of October, 1877, 66 Candidates presented themselves, of whom 53 passed and 13 did not pass. At the Supplemental Examination held on Tuesday, the 13th of November, 21 Candidates presented themselves, of whom 17 passed and 4 were rejected. The total number of Candidates who passed was, therefore, 70. To these are to be added 5 Students admitted *ad eundem* from other Colleges and Universities, and 15 new Non-Matriculated Students, making the total of new Matriculated Students 75, and the total number of Students Matriculated and Non-Matriculated 90. The following table shows the distribution of these Students in the several Faculties:—

	Matriculated Students.	Non-Matriculated Students.	Total.
Faculty of Arts, ...	18	4	22
" Law, ...	3	2	5
" Medicine, ...	45	9	54
School of Engineering, ...	9	—	9
Total, ...	75	15	90

In addition to the newly entered Students 16 other Students who had failed last Session in obtaining promotion, or who having Matriculated at some former time, had not, through illness or other causes, attended Lectures, joined the classes of the First Year.

The total number of Matriculated Students on the College books for the Session 1877-78 was 238, and of Non-Matriculated Students 19, making together 257. The following table shows their distribution among the several Faculties:—

	Matriculated Students.	Non-Matriculated Students.	Total.
Faculty of Arts, ...	56	4	60
" Law, ...	8	2	10
" Medicine, ...	158	13	171
School of Engineering, ...	20	—	20
Gross Total, ...	242	19	261
Deduct number of Students attending } Lectures in two Faculties. }	4	—	4
True Total, ...	238	—	257

The following table gives the classification according to Academic Standing:—

Number of Students of the	Matriculated Students.	Non-Matriculated Students.	Total.
First Year, ...	91	15	106
Second, ...	57	3	60
Third, ...	56	1	57
Fourth, ...	38	—	38
Gross Total, ...	242	19	261
Deduct number of Students attending } Lectures of different years, }	4	—	4
True Total, ...	238	—	257

In the following table is given the distribution of the Matriculated Students on the College books for the Session 1877-78, among the several Faculties, and their classification according to Academic Standing:—

	Number of Matriculated Students on the College Books of the				Total.
	First Year.	Second Year.	Third Year.	Fourth Year.	
Faculty of Arts, ...	21	18	11	8	56
" Law, ...	4	3	—	1	8
" Medicine, ...	55	33	41	29	158
School of Engineering, ...	11	5	4	—	20
Gross Total, ...	91	57	56	38	242
Deduct Number of Students attending } Lectures in two Faculties, }	—	—	—	—	4
True Total, ...	—	—	—	—	238

2. COMPARISON OF THE NUMBER OF STUDENTS ATTENDING THE COLLEGE DURING THE PAST SESSION WITH THE NUMBER IN EACH OF THE PRECEDING FIVE SESSIONS RESPECTIVELY.

The number of Students on the College books for the Session 1877-78 was greater than for either of the five preceding Sessions, as will be seen from the following table in which the Students are classified according to Academic Standing:—

	Number of Students in the Session of					
	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.	1877-78.
Matriculated Students—						
Of the First Year, . . .	105	77	79	95	72	91
" Second " . . .	51	58	60	48	58	57
" Third " . . .	36	52	58	49	45	56
" Fourth " . . .	25	51	30	34	33	38
Attending Special Courses, . .	3	—	—	—	—	—
Total, ...	232	238	227	226	208	242
Non-Matriculated Students, . .	20	22	23	24	24	19
Total Number of Students, . .	252	250	250	250	232	261
Deduct numbers attending } Lectures of two different } years, ... }	—	—	—	—	—	4
True Total, ...	—	—	—	—	—	257

The following table shows the distribution among the several Faculties of the Students on the College books during the same years :—

	Number of Students in the Session of					
	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.	1877-78.
Faculty of Arts, ...	49	64	58	53	63	80
" Law, ...	13	7	7	3	4	10
" Medicine, ...	174	170	174	178	152	171
School of Engineering, ...	22	19	23	27	23	20
Gross Total, ...	257	260	252	259	241	261
Deduct Number of Students } attending Lectures in two } Faculties, ... }	5	10	12	9	9	4
True Total, ...	252	250	250	250	232	257

It will be seen from the foregoing table that the decrease in the number of Students in the Faculty of Medicine, noticed in my last Report, was due to temporary causes, such as I therein specified.

3. LOCALITIES FROM WHENCE STUDENTS COME.

The majority of our Students during the past Session belonged, as heretofore, to the South of Ireland, and especially to the county and city of Cork. The following table shows the per-centage of Students from the Province of Munster, and from other places, and also the per-centage of Munster Students from the county and city of Cork, for the Session 1877-78, and the three preceding Sessions :—

Session.	Per-centage of Students from		Per-centage of Munster Students from	
	Province of Munster,	Other Localities.	County and City of Cork.	Other Counties of Munster.
1874-75, ...	93·8	6·2	78·5	23·5
1875-76, ...	85·8	14·2	75·2	24·8
1876-77, ...	90·6	9·4	78·3	21·7
1877-78, ...	85·8	13·2	72·2	27·8

The Students belonging to the county and city of Cork formed 62·6 per cent. of all the Students attending the College in the past Session.

4. AGES OF STUDENTS.

Of the new Students 79·25 per cent. were 17 years of age and upwards, and 20·75 were under 17 years of age. Taking all the Students of this College, 89·9 per cent. were 17 years of age and upwards, 10·1 per cent. under 17 years of age, and 46·3 per cent. were 20 years of age and upwards.

5. RELIGIOUS DENOMINATIONS OF STUDENTS.

The following table shows the number of Students belonging to the several religious denominations who entered the College in the Session 1877-78:—

	Matriculated Students.	Non-Matriculated Students.	Total.
Catholics, ...	35	10	45
Church of Ireland, and Church of England, }	37	3	40
Presbyterians, ...	2	2	4
Wesleyans, ...	1	—	1
Total, ...	75	15	90

The following table gives the number of Students belonging to each of the several religious denominations on the books of the College for the Session 1877-78, classified according to Academic Standing:—

Religious Denominations	Matriculated Students of the				Non-Matriculated Students.	Gross Total.	Net total, deducting students attending Lectures of different years.
	First Year.	Second Year.	Third Year.	Fourth Year.			
Catholics, Church of Ireland, and Church of England, }	48	27	22	22	14	133	130
Presbyterians, ...	3	2	3	1	2	11	11
Wesleyans, ...	4	4	1	1	—	10	10
Independents, ...	—	1	—	—	—	1	1
Total, ...	55	34	26	24	16	155	152

Roman Catholics formed, therefore, 50·58 per cent. of all the Students of the College in the Session, 1877-78.

The following table gives the number of Students belonging to each of the several religious denominations attending the several Faculties during the past Session:—

Faculty.	Catholics.			Church of Ireland and England.			Presbyterians.			Wesleyans.	Independents.	Gross Total.
	Matr.	Non-Matr.	Total.	Matr.	Non-Matr.	Total.	Matr.	Non-Matr.	Total.	Matr.	Non-Matr.	
Faculty of Arts, ...	23	1	24	20	1	21	3	2	5	4	1	40
“ Law, ...	5	2	7	3	—	3	—	—	—	—	—	10
“ Medicine, ...	58	11	69	46	2	48	1	—	1	3	—	171
School of Engineering, ...	5	—	5	14	—	14	—	—	—	1	—	20
Gross Total, ...	111	14	125	103	3	106	4	2	6	8	1	242
Deduct No. of Students attending Lectures in two Faculties, ...	5	—	5	1	—	1	—	—	—	—	—	6
True Total, ...	106	14	120	102	3	105	4	2	6	8	1	236

the following table will be found the number of Scholars and Exhibitioners in the Session of 1877-78 belonging to each of the several religious denominations:—

	Catholics.		Church of Ireland.		Presbyterians.		Wesleyans.		Total.	
	Scholar.	Exhibitioner.	Scholar.	Exhibitioner.	Scholar.	Exhibitioner.	Scholar.	Exhibitioner.	Scholar.	Exhibitioner.
Faculty of Arts, . . .	11	2	13	1	7	—	1	—	32	3
“ Law, . . .	3	—	—	1	—	—	—	—	3	1
“ Medicine, . . .	5	4	3	4	—	—	1	—	8	9
School of Engineering, . .	1	—	4	—	—	—	—	—	5	—
Total, . . .	20	6	20	6	7	—	1	1	48	13

The number of Students belonging to each of the several religious denominations at the College in the Session of 1877-78, can be compared with the corresponding numbers in each of the preceding ten years in the following table:—

Religious Denominations.	TOTAL NUMBER OF STUDENTS OF EACH RELIGIOUS DENOMINATION IN THE SESSION OF										
	1867-68	1868-69	1869-70	1870-71	1871-72	1872-73	1873-74	1874-75	1875-76	1876-77	1877-78
Roman Catholics, .	131	97	94	86	104	107	125	129	131	113	120
Church of England, and now of Ireland,	118	125	124	142	151	136	116	86	101	100	105
Presbyterians, .	7	12	8	12	10	8	9	8	7	8	11
Wesleyans, .	11	10	16	10	8	5	2	10	11	12	19
Other Denominations, .											
Not recorded, .	—	—	—	—	—	2	—	7	—	—	—
Total, . .	247	244	252	250	263	252	250	250	250	232	237

The following table calculated from the foregoing one, shows the relative proportion of Roman Catholics, Church of Ireland Protestants, and Protestants of all denominations, for each of the years embraced by the table referred to:—

Session.	Percentage of total Students who were			
	Protestants of			Roman Catholics.
	The Established Church or Church of Ireland.	Other Denominations.	All Denominations.	
1866-67, . . .	48·08	8·95	55·03	46·95
1867-68, . . .	47·77	7·28	55·05	44·93
1868-69, . . .	51·22	9·01	60·23	39·75
1869-70, . . .	53·17	9·52	62·69	37·30
1870-71, . . .	58·80	8·90	65·60	34·40
1871-72, . . .	51·77	7·11	58·88	41·10
1872-73, . . .	51·58	5·15	56·73	42·46
1873-74, . . .	46·40	4·40	50·80	49·20
1874-75, . . .	38·40	7·20	45·60	51·60
1875-76, . . .	40·40	7·20	47·60	52·40
1876-77, . . .	43·10	8·19	51·30	48·70
1877-78, . . .	40·86	8·26	49·42	50·58

6. SCHOLARSHIPS, EXHIBITIONS, &c.

The Scholarship Examinations commenced on Thursday, October 18th, and were continued on the days stated in the table in

The Special Prize of £5 for the encouragement of the study of Ancient History, mentioned in my last report, was again awarded in the past Session.

The names of the Scholars and Exhibitioners for the Session 1877-78 are given in the Appendix (B, No. VII., p. 54).

7. LECTURES.

A list of the subjects in which instruction is given in the College, the total number of Students who attended classes in those subjects, and the number of lectures given in each subject, will be found in the Appendix (B, No. X., p. 58). Under the head of each Faculty, detailed information as to the courses of studies, outlines of the lectures given by each Professor, &c., are also given in the Appendix (A, No. II., p. 31, *et seq.*; No. III., p. 41; No. IV., p. 43; and No. V., p. 48, *et seq.*). Each Professor has also furnished a Special Report of his work for the Session. According to these Reports, which are given in the Appendix (C, No. XI., p. 58, *et seq.*), the attendance of the Students at lecture was very satisfactory.

Nothing has been done, so far as I am aware, to remove the impediments in the way of Attorney's Apprentices attending the Law lectures in the College, to which I drew attention in my last Report, and to which the Professor of English Law refers in his Report (Appendix C., No. XI., p. 66). I hope the Council of the Incorporated Society may be induced to take the matter into favourable consideration before next Session.

I thought it better to postpone bringing the recommendation of the Professors of Anatomy and Physiology, and *Materia Medica* to establish Summer courses of Lectures in the Faculty of Medicine, before the Council, until the changes and improvements now being made in the Medical School shall have been completed. I propose to do so however next Session. The Professor of Anatomy and Physiology has repeated his recommendation on the subject in his last Report, (Appendix C., No. XI., p. 67).

8. ESTABLISHMENT OF CHAIRS OR LECTURERSHIPS OF "STATE MEDICINE," AND PSYCHOLOGICAL MEDICINE.

The new functions assigned to physicians under the various Sanitary Acts of Parliament should be recognised and provided for in the curriculum of medical studies. For example, I think, a course of lectures on Sanitary Science should be annually delivered in the College, and the Local Government Board should require all candidates for medical appointments under them to have attended such a course of lectures. The proposed course of lectures might be given by a lecturer specially appointed for the purpose, or a special chair might be established for Medical Jurisprudence and Public Health. These two subjects would practically include what is usually understood by the vague, and not very appropriate name of "State Medicine."

Physicians, especially those holding appointments under the Local Government Board, are also frequently called upon to give

a certificate of insanity upon which a magistrate's warrant can be obtained to commit a patient to a lunatic asylum. It seems needless to observe that anyone entrusted with such a responsible function ought to be specially qualified by his study of mental disease to perform it. But the giving of such a certificate is only an incidental part of the duties of a physician in this behalf, his true function is to preserve health and cure disease. Owing to the great advance made in medical science, insanity is now looked upon in the same light as any other form of disease, which, if taken in time, offers many chances of cure. The diagnosis and treatment of mental diseases forms part of the usual course of every Professor of the Practice of Medicine; but as cases of insanity are not met with in the wards of general medical and surgical hospitals, students have not an opportunity of becoming practically acquainted with the various forms of mental disease, and of thus acquiring the skill necessary to enable them to detect them in their incipient stages, and while yet capable of being cured. The Senate of the Queen's University proposed to remedy this manifest defect in medical education by a regulation made on the 16th of October, 1876, similar to that of the London University, permitting a student to substitute for three months of the usual hospital attendance, required for the degree of Doctor in Medicine, attendance on clinical instruction at a recognised Lunatic Asylum. I was anxious that the students of this College should have an opportunity of benefitting by this regulation, and I accordingly asked Dr. Eames, the Medical Superintendent of the Cork District Lunatic Asylum, if he would give a course of clinical instruction, provided the sanction of the Governors of the Asylum, and the authority of Your Majesty's Privy Council in Ireland were obtained. That gentleman having at once expressed his willingness to aid in every way in his power the promotion of medical education, I addressed a letter on the 15th of January, 1877, to the Governors asking them to sanction the proposed course of clinical instruction. The Board of Governors at a meeting held on the 2nd of February, 1877, passed a resolution expressive of their opinion that while the proposed clinical lectures would be beneficial to medical students, they would not in any way interfere with the due working of the institution. By an Order in Council of the 7th of May, 1877, the Medical Superintendent of the Cork District Asylum was authorized to deliver clinical and other lectures on subjects connected with the medical and moral treatment of insanity to duly matriculated medical Students of the Queen's University in Ireland. Dr. Eames at once set to work to prepare his course, so as to have everything ready for the Session 1877-78. In the meantime, however, the Senate of the Queen's University rescinded the regulation permitting students to substitute three months attendance with clinical instructions at a lunatic asylum for attendance at a general hospital for a like period. The reason assigned for this decision was that the amount of general hospital attendance now required of students was barely sufficient and should not be diminished even for so important a purpose as the practical study of mental disease. Though this

decision interfered with the formation of a class, Dr. Eames nevertheless delivered in the College the inaugural lecture of his intended course.

The real obstacle to the establishment of such a course, or indeed to that of any new one is, however, want of time. Under the existing arrangement by which the work of eight or nine months is compressed into that of five or six a medical student has no time, even if he had the inclination, to devote to subjects not included in obligatory courses, however essential a knowledge of them may be to the properly educated physician. The establishment of a Summer Session would relieve the Students from the present overwork of the Winter Session and give him time to properly study such important subjects as Practical Chemistry, Practical Physiology, Public Health, and Mental Diseases.

As in the case of sanitary medicine I would also suggest that the Local Government Board should require all candidates for medical appointments to produce a certificate of having attended a course of lectures on mental diseases joined with clinical instruction in a lunatic asylum, during at least three months. The College, too, should keep pace with the advances taking place in medical education by establishing a lectureship of Psychological Medicine as it cannot yet found a chair for the subject, as has been done in some of the great schools of the Continent and America.

9. SESSIONAL EXAMINATIONS AND PRIZES.

The examinations held at the end of the several courses in each Faculty were satisfactory. The number of students who took part in the practical part of the examination in Anatomy was so large that room could not be found for all who wished to join. The additions to the medical school now nearly completed will afford ample space, even for the whole class next session.

10. UNIVERSITY EXAMINATIONS.

The following table gives the number of students of Queen's College, Cork, who passed the examinations of their Standing and Faculty, and obtained Degrees, Diplomas, &c., at the June and October Commencements of the Queen's University in Ireland, for the year 1877—

FACULTY OF ARTS.			
Degree of Master of Arts (M.A.),	4	First University Examination in	
" Bachelor of Arts (B.A.),	3	Arts,	7
SCHOOL OF ENGINEERING.			
Degree of Bachelor in Engineering		First University Examination	
(B.E.),	5	in Engineering,	3
FACULTY OF LAW.			
Degree of Doctor in Laws (LL.D.),			1
FACULTY OF MEDICINE.			
Degree of Doctor in Medicine (M.D.),	14	Second Examination in Medicine,	23
" Master in Surgery (M.Ch.),	12	First University Examination in	
		Medicine,	33
Postponed Subjects,			1

The names of those upon whom the several degrees were conferred, and of the undergraduates who passed the examinations of their standing, are given in the Appendix (B, No. VI, p. 52).

11. CONDUCT AND DISCIPLINE.

The Professors, with one exception, and the Librarian were able to report that the conduct and discipline of the students in the class-rooms, laboratories, &c., and in the library, had been very good (see Appendix C, No. XI, p. 58, *et seq.*, No. XII, p. 70). The single exception referred to, is the Professor of Midwifery, whose classes hitherto have been so distinguished for good discipline, that he was surprised at its having been slightly disturbed on some occasions by a few students. Very few cases of misconduct of any kind came to my knowledge and none of sufficient gravity to call for the direct action of the Council.

12. RECEIPTS AND EXPENDITURE OF THE COLLEGE.

The Bursar's Annual Account of the Receipts and Expenditure of the College for the year ending the 31st of March, 1878, and his account of the expenditure of the Annual Parliamentary Grant for the maintenance of the College, and the College Fees and Fines for the same period, are given in the Appendix (C, No. XIII, p. 71). The detailed accounts of which these are summaries have been signed and passed by the Auditor-General. Some items in these accounts require explanation. Some friends of the College have promised to give donations to aid in the carrying out of improvements now being made in the College, and which I shall describe further on. In order to distinguish the money thus obtained from private sources from that voted by Parliament or derived from College and Professors' Fees, a special account has been opened in the Bank of Ireland to the credit of which all donations as they shall be received will be paid. This fund will be treated as regards expenditure and audit like all other college funds. The Lords Commissioners of Your Majesty's Treasury having sanctioned the purchase of additional ground on the condition that the College provided from its unappropriated balances one-half the purchase money, as I stated in my last report; and Parliament having since voted the other half, the College has paid over its share to the Board of Public Works in Ireland. To meet this expenditure the College, with the sanction of His Grace the Lord Lieutenant, sold the whole of the Government New Three per Cent. Stock standing to its credit, as stated in the Bursar's Account for the year ending the 31st of March, 1877.

13. LIBRARY.

The Librarian reports (Appendix C, No. XIII, p. 70.) that, exclusive of about 176 volumes of the Transactions of Learned Societies, and Journals regularly received by the College, 802 volumes have been added to the Library since the date of his last Report, of which 379 volumes were purchased, and 423 presented.

Among the books presented are included 331 volumes given by W. H. Crawford, Esq., of Lakelands. This second gift of Mr. Crawford to the Library, is of greater utility than even his first gift, which I had the pleasure of recording in my last Report. It consists chiefly of costly historical books, such as every collegiate library should possess, and especially one destined to serve as a library of reference for the South of Ireland, a function which it to some extent already performs, as may be seen by an observation in the Librarian's Report. In accordance with Mr. Crawford's wish that the books given by him should be kept together, they have been placed for the present in a number of cases specially set apart for them in the Examination Hall, and labelled "Crawford Library."

The rough draft of a general alphabetical catalogue of the whole library will be completed this year.

The Library has been much improved both as regards light and comfort by the substitution of sheet glass for the lead-lattice windows; it has also been furnished with fittings for lighting it with gas. The Librarian's room has been fitted with shelves, and additional shelves have been introduced here and there throughout the Library wherever by re-arrangement of the books room could be made. So rapid however has been the growth of the Library, the gifts alone exceeding 1,000 volumes during the last two years, that all the space thus gained has been filled up. Something must therefore be done to provide additional accommodation, not only for books, but for the increasing number of readers, both Students of the College and others who use the Library for purposes of reference.

In the Appendix (E., No. XV., p. 131) will be found a list of the books comprised in Mr. Crawford's second gift, and also a list of the other donations, and the donor's names.

14. ASTRONOMICAL AND METEOROLOGICAL OBSERVATORY.

In my last report I alluded to the want of an Observatory to teach practically the methods of Observation employed in Astronomy, Magnetism and Meteorology, and expressed a hope that a beginning might be made in the course of last session to provide one. This hope has, I am glad to say, been fully realized. Mr. W. H. Crawford, among his other munificent gifts to the College, has given one thousand pounds towards the purchase of astronomical instruments. These we have commissioned Mr. Howard Grubb of Dublin to make for us, who has already executed the most important instrument, an 8 $\frac{1}{2}$ -inch telescope, equatorially mounted, now exhibited at Paris. The building and revolving dome will cost about £800, of which His Grace the Duke of Devonshire has generously promised to give £500. The remainder I hope to get by donations from friends of the College, especially those resident in or having property in the South of Ireland, as well as from persons interested in the promotion of science. The College itself will, I trust, be able to purchase from time to time such additional instruments as we cannot now get.

15. **PHYSIOLOGICAL LABORATORY.**

The working tables, instrument cases, &c., fitted up in the temporary Physiological Laboratory have been removed into the room provided in the new arrangement of the Medical School for the permanent Laboratory, as I stated in my last report would be done. By the beginning of next Session I expect all the fittings will be completed. In the meantime the Professor of Anatomy and Physiology was able to use the Laboratory for teaching a class in experimental Physiology and Histology.

16. **ENLARGEMENT AND IMPROVEMENT OF THE MEDICAL SCHOOL.**

In my last report I referred to the two sets of plans proposed by Mr. Owen, Architect of the Board of Public Works, for the alterations proposed to be made in the Medical School, and the additions to be made thereto, and I expressed an opinion that the second set of plans prepared to meet the limited funds voted by Parliament, though inferior in some respects to the first and more expensive plans, would, nevertheless, provide ample and convenient accommodation for all the Professors of the School. I am glad that this opinion formed by an inspection of the plans is fully borne out by the work executed. The alterations provided for in the plans were all completed before the beginning of the College Session, so that no interruption took place in the work of the School. I think it due to Mr. Owen, Architect of the Board of Works, to say that the College is very much indebted to him for the great trouble he took in the preparation of a new set of plans in a very short time, and for having succeeded in effecting alterations in the Medical School, so extensive that they involved a complete transformation of the internal arrangement of the building, in the short time at his disposal, without interfering in the least with the work of the College. Let me also add that he was fortunate in having so intelligent an officer to carry out his instructions as Mr. P. Lynch, the Clerk of Works, and that much credit is due to the Contractor, Mr. P. Kenna, for the energetic way in which, under many difficulties and in a very limited time, he made the required alterations.

The additions to the Medical School are in a forward state, and with the exception of the Anatomical and Pathological Museum will be ready for use next Session. The cases for the new museum will be made during the ensuing year, so that I hope we shall be able to transfer our collection to it next summer.

Among the alterations and additions originally proposed to be made in the Medical School buildings, the only one not provided for in the architect's plan is the very necessary one of raising the roof of the Anatomical Lecture Room, so as to give more air space for a large class, and wall space for hanging diagraphs, and providing accommodation for microscopes. These wants were fully provided for in the first plan, but could not be included in the second from want of money. The Professor of Anatomy and Physiology has drawn attention in his Report (Appendix C, No. XI. p. 66) to these defects. As the cost of raising the roof and

making a projecting window for microscopes would not be much I hope provision will be made in next year's estimates for doing so. When this shall be done, the College will possess one of the best Medical Schools of the Kingdom, and scarcely, if at all, inferior to the one which the first plans would have given us.

17. MUSEUMS.

Nothing helps to create and foster a taste for natural history better than collections illustrative of local fauna and flora. Such collections should, therefore, find a place in every museum of natural history. A good beginning has been made this year to supply this want in our Museum. Dr. Harvey, Professor of Midwifery, has generously presented to the College his valuable collection of birds shot wild in the south of Ireland, the gathering together of which has occupied his leisure for nigh half a century. This collection, which contains examples of about 175 species and 100 genera and subgenera, consists of about 355 specimens, many of which are of great rarity. Dr. Harvey has also given us his large collection of the eggs of native birds, and his collection of native mammals. These collections, which the Council propose to call "The Harvey Collection of Native Birds and Mammals," will form the basis of a complete local fauna towards the further growth of which we hope for contributions from Irish naturalists. The nucleus of a local flora has also been formed by the purchase of more than 1,000 species of plants, including between 500 and 600 species of lichens, mosses, and jungermanniaceæ, collected by Mr. Isaac Carroll.

Advantage has been taken of the changes made in the Museum consequent upon providing accommodation for the Harvey Collection to re-arrange and label the collection in the Natural History Museum, so as to make it more useful to the students, and to the increasing number of visitors to the Museum.

The collection of Anatomical and Pathological preparations belonging to the Medical School has been temporarily placed in the rooms, to be hereafter appropriated as a museum of instruments and hospital and sanitary appliances, pending their removal to the new museum. The collection has been carefully gone over, put in thorough order, and labelled. This work has been well done by one of our young Medical Graduates, Dr. Barry, Senior Demonstrator of Anatomy last Session, who has devoted much time and labour to the work, and deserves our best thanks.

It is impossible to keep our extensive collections in that order and condition, without which museums are not only useless for teaching science, but actually serve to mislead, without a Curator who would look after them, and be responsible for their proper state. The want of such an officer was referred to in the memorial of the College presented to his Grace the Duke of Abercorn, Lord Lieutenant in 1874, and I have mentioned it in previous Reports. The College could not, however, appropriate any of its present income to pay a salary to such an officer.

18. EXTENSION OF COLLEGE GROUNDS, NEW ENTRANCE TO THE COLLEGE AND BOTANIC GARDEN.

The additional land, to the purchase of which I have already referred, has come into our possession since I made my last Report. This land was acquired for three purposes :—1. To secure sufficient free space about the College before the adjoining land should be built upon; 2. To obtain suitable ground for a small Botanic Garden, and having a good site for Plant Houses; and 3. To secure the land necessary to make a direct entrance to the College from the Western road.

The first object was directly secured by the purchase of the land, but the second and third objects involved in addition the expenditure of a large sum of money. Parliament having last year provided funds for the improvement and enlargement of the Medical School, I did not see any immediate prospect of obtaining the money for the objects in question from it, unless the College could, as in the case of the land, provide part of the cost. But outside its scanty endowment, and the annual Parliamentary grant for the maintenance of the College, and a small sum derived from College fees and fines, the College has no money, except what may accrue from the small balances of the annual receipts unappropriated at the end of each year, accumulating during several years. It was from this source the College derived the money contributed for the purchase of the additional land above referred to. But as that purchase had exhausted what could be spared of that small fund, I determined to look for local aid. Mr. W. H. Crawford, who had already evinced his interest in the College by a valuable gift of books, on being made aware of our wants generously promised to give a sum of £2,500, of which £1,000 was for astronomical instruments for our proposed Observatory, and £1,500 for the erection of Plant Houses in the Botanic Garden, on condition that your Majesty's Government would recommend to Parliament to provide the money for enclosing and laying out the new ground, and making a new entrance from the Western road to the College. Subsequently Mr. Crawford increased his offer of £1,500 to £2,750, being half the estimated cost of the works just named.

The Lords Commissioners of your Majesty's Treasury accepted Mr. Crawford's generous offer of providing half the money necessary for making the proposed works, which were estimated to cost £5,500, and accordingly sanctioned the insertion of that sum, into the estimates which have been just voted by Parliament. Thanks to Mr. Crawford and the bounty of Parliament, the College will, at length, have a proper entrance opening upon the highway that will bring it within a moderate distance of town, and be provided with those material aids which are indispensable to the cultivation and teaching of knowledge.

Before leaving this subject I should not forget to mention the service which the Corporation of Cork has rendered to the College in connexion with our new entrance. The proprietor of a narrow slip of land on the north bank of the river through

which we had hoped to get access from the Western-road to our proposed bridge having refused to sell or let it. Mr. Francis M. Jennings, from whom the land on the south side of the river was about to be purchased, generously came to our assistance and offered as a free gift to the College the fee of a piece of the adjoining land on the north bank of the river Lee sufficient for our entrance and bridge, and also to sell so much additional land on the south side of the river as might be required for the site of the bridge and road for the same sum of money as had been offered for the narrow shelf of land just referred to, although this was less in proportion than what he was to be paid for the rest of his land on the south side. The ground offered by Mr. Jennings as a free gift formed part of land in the possession of the Corporation of Cork, but that body at once readily consented to give a lease of the plot granted to the College for the residue of their own term. Subsequently the Corporation allowed us to enclose within our boundary part of Gill Abbey-lane, a permission which is of the greatest advantage to the college in carrying out the proposed works.

I cannot close this Report of the Proceedings and Condition of Queen's College, Cork, without referring to a matter upon which so much of the satisfactory working of the College must necessarily depend, the adequate payment of the Professors, Officers, and Servants. Last year they had hoped that as the result of the Commission appointed by Your Majesty's Government to inquire into the subject, something would have been done to increase their present very inadequate salaries. Nothing was, however, done, and this year again they have been disappointed. I trust in the interest of education and of the continued welfare of this College, that their just claims will be taken into immediate consideration.

I beg to subscribe myself,

Your Majesty's most dutiful servant,

WILLIAM K. SULLIVAN,

President.

QUEEN'S COLLEGE, CORK,

July, 1878.

APPENDIX.

Appendix.

No. I.
General
Regulations
of College,
&c.

APPENDIX A.

No. I.

ESTABLISHMENT of the COLLEGE and UNIVERSITY. COLLEGE STAFF. GENERAL REGULATIONS of the COLLEGE. STUDENTS: MATRICULATION, RESIDENCES, FEES, LECTURE HOURS, SCHOLARSHIPS, EXHIBITIONS, PRIZES, DEGREES.

QUEEN'S UNIVERSITY IN IRELAND—QUEEN'S COLLEGE, CORK.

ESTABLISHMENT OF THE COLLEGE AND UNIVERSITY.

THE COLLEGE is a Corporation under the name and style of "THE PRESIDENT and PROFESSORS OF QUEEN'S COLLEGE, CORK." It was founded under the provisions of the Act 8 & 9 Victoria, cap. 66, intituled "An Act to enable Her Majesty to endow new Colleges for the Advancement of Learning in Ireland." Under the powers given by this Act the three colleges of Belfast, Cork, and Galway were incorporated on the 30th day of December, 1845. The Statutes were drawn up, and the system of education to be pursued in them arranged by a Board called the "Board of Queen's Colleges," consisting of the Presidents and Vice-Presidents of the three colleges. The Professors were appointed on the 4th of August, 1849, and on the 30th of October of the same year the Colleges were opened for the reception of students. Letters Patent constituting the Statutes were issued on the 11th of December, 1849, and a further Charter was issued in the year 1863.

THE UNIVERSITY was founded in 1850 under the name and style of the "QUEEN'S UNIVERSITY IN IRELAND," and its charter provides that the Senate should have power to confer upon the students of the Queen's Colleges of Belfast, Cork, and Galway such degrees and distinctions in the Faculties of Arts, Law, and Physic, as are granted and conferred in other Colleges and Universities of Great Britain and Ireland. The Charter further ordains that any of the students of the three Queen's Colleges who shall have obtained such Degrees in any of the several Faculties of Arts, Medicine, and Law as shall be conferred by the Chancellor and Senate of the Queen's University, shall be fully possessed of all such rights, privileges, and immunities, as belong to similar Degrees granted by other Universities or Colleges, and shall be entitled to whatever rank and precedence is derived from similar Degrees granted by other Universities.

The Professors of the three Queen's Colleges are entitled to style themselves "Professors of the Queen's University."

VISITORS.

HIS GRACE THE DUKE OF LEINSTER.

HIS GRACE THE ARCHBISHOP OF DUBLIN.

THE RIGHT HONOURABLE THE CHIEF SECRETARY FOR IRELAND.

THE RIGHT REV. THE LORD BISHOP OF KILLALOE.

THE RIGHT HONOURABLE THE MASTER OF THE ROLLS.

THE RIGHT HONOURABLE MR. JUSTICE FITZGERALD.

THE MODERATOR OF THE GENERAL ASSEMBLY OF THE PRESBYTERIAN CHURCH IN IRELAND.

THE PRESIDENT OF THE KING'S AND QUEEN'S COLLEGE OF PHYSICIANS.

THE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS.

COLLEGE STAFF.

President—WILLIAM K. SULLIVAN, PH.D., M.R.I.A.

Professors.

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The Greek Language, ...	E. VAUGHAN BOULGER, M.A.
The Latin Language, ...	BUNNELL LEWIS, M.A., F.S.A.
Mathematics, ...	{ CHARLES NIVEN, M.A., LATE FELLOW OF TRIN. COLL., CAMB.
Natural Philosophy, ...	JOHN ENGLAND, M.A.
History and English Literature, ...	GEORGE F. ARMSTRONG, M.A.
Logic and Metaphysics, ...	GEORGE SIGNEY READ, M.A.
Chemistry, ...	MAXWELL SIMPSON, D.A., M.D., F.R.S.
Natural History, ...	ROBERT HARKNESS, F.R.S.E. & E., F.G.S.
Modern Languages, ...	RAYMOND DE VERICOUR, M.A.
Jurisprudence & Political Economy, ...	RICHARD HORNER MOLLS, M.A.
English Law, ...	{ MARK S. O'SHAUGHNESSY, M.B.I.A., F.R.S.L.
Anatomy and Physiology, ...	J. J. CHARLES, M.A., M.D., M.C.H.
Medicine, ...	DENIS C. O'CONNOR, B.A., M.D.
Surgery, ...	WM. K. TANNER, M.D., F. & A.R.C.S.
Materia Medica, ...	MATTHIAS O'KEEFE, M.A., M.D.
Midwifery, ...	JOSHUA R. HARVEY, B.A., M.D.
Engineering, ...	ALEXANDER JACK, M.A.

Lecturers.

Medical Jurisprudence, ...	{ MARK O'SHAUGHNESSY, M.B.I.A., F.R.S.L. MATTHIAS O'KEEFE, M.A., M.D.
Assistant to Professor of Chemistry, ...	CORNELIUS O'KEEFE, County and City Analyst.
Demonstrators of Anatomy, ...	{ Senior—D. F. BARRY, M.D., Junior—CHARLES Y. PEARSON. C. K. TANNER, B.A., M.D.

Council of the College.

THE PRESIDENT.

PROFESSOR NIVEN.	PROFESSOR CHARLES.	PROFESSOR JACK.
" ARMSTRONG.	" HARVEY.	" ENGLAND.

Officers.

Registrar, ...	ALEXANDER JACK, M.A.
Bursar, ...	JOHN ENGLAND, M.A.
Librarian, ...	RICHARD CAULFIELD, LL.D.

Steward and Superintendent of the Botanic Garden, . . JOHN SULLIVAN.

GENERAL REGULATIONS.

THE COLLEGE SESSION, 1877-78.—The First Term commenced on the 16th of October, 1877, and ended on the 22nd of December.

The Second Term commenced on the 7th of January, 1878, and ended on the 13th of April.

The Third Term commenced on the 29th of April, 1878, and ended with the Session, on the 8th of June.

N.B.—The Easter Recess for the Medical Faculty commenced on the Tuesday before Easter, and ended on Easter Monday.

REGISTRAR'S AND BURSAR'S OFFICES.—The Registrar's Office is open during Term from 12 to 1 o'clock on Tuesday and Thursday, and from 1 to 2 o'clock on Wednesday and Friday. Students are requested to apply for their certificates at the end of the Session.

The Bursar's Office is open from 12 to 1 o'clock on every Monday, Wednesday, and Friday during Term.

LIBRARY AND MUSEUMS.—The Library is open daily to Students between the hours of 9 A.M. and 4 P.M., except on Saturdays, when it is closed at 1 o'clock.

The Museums of Natural History and Geology and Mineralogy are open daily between the hours of 9 A.M. and 3 P.M., except on Saturdays, when they are closed at 12 o'clock. The Anatomical and Pathological Museums are open daily.

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STUDENTS.

The Students of the College are either Matriculated or Non-Matriculated.

MATRICULATED STUDENTS.—To become a *Matriculated Student*, it is necessary to pass the General Matriculation Examination which commenced in the Session of 1877-78, on Tuesday, the 16th of October, 1876, at 9 o'clock, A.M.

Candidates for Matriculation are requested to send their names to the Registrar, at least *three days* before the commencement of the Examination, stating at the same time the Faculty or Department which they propose to enter.

Before being admitted to Examination they are required to pay the *College Fees* for the year, amounting to Ten Shillings for each Faculty or Department. These will be returned, on application, to such as fail to pass the Examination.

No Student will receive a Certificate of Matriculation until he has paid the whole of the *Class Fees* for the Session, and commenced attendance on Lectures.

The following are the Subjects in which Candidates are examined:—

For the Faculties of Arts, Medicine, and Law.

Greek:

Grammar. (Curtius' Greek Grammar recommended.)

Any one of the following Authors which the Candidate may select:—

Demosthenes—Olynthiac Orations.

Euripides—*Alkestis*.

Homér—*Iliad*, Books I. and II.

Xenophon—*Anabasis*, Books I. and II.

Lucian—Walker's Selections.

Latin:

Any one of the following Authors which the Candidate may select:—

Virgil—*Æneid*, Books I. and II.

Sallust—*Conspiracy of Catiline*.

Cæsar—*Gallie War*, Book I.

History:

Outlines of Grecian History. (Smith's History of Greece recommended.)

Outlines of Roman History. (Liddell's History of Rome recommended.)

Geography:

Outlines of Ancient and Modern Geography.

English:

Grammar—

(1.) The principles of Etymology and Orthography.

(2.) The leading Rules of Syntax.

Composition, and writing from dictation.

Mathematics:

Arithmetic—Principles of Notation. Vulgar and Decimal Fractions. Definition of the term Ratio and Proportion. The Rule of Proportion, with its commercial applications, including Simple Interest.

Algebra—Including the addition, subtraction, multiplication, and division of Algebraic Expressions, and the solution of Simple Equations.

Euclid—Books I. and II., with the definitions and axioms.

For the Department of Civil Engineering.

The Outlines of Modern Geography.

Grammar.

Mathematics:

Arithmetic—Principles of Notation. Vulgar and Decimal Fractions, with the reasons of the different rules. Rule of Proportion, with its commercial applications. Extraction of the Square Root, both of whole numbers and decimals.

Algebra—Including the addition, subtraction, multiplication, and division of Algebraic Expressions, Fractions, and solution of Simple Equations.

Geometry—As much as is contained in Euclid, Books I., II., III., IV. Wilson's Elementary Geometry (3rd Edition) is recommended.

NON-MATRICULATED STUDENTS.—Those who desire to attend any of the Lectures in the College may do so, without matriculating, or passing any of the

College Examinations, on paying the Fees for those Lectures, together with a College Fee of Five Shillings. *Appendix A.*

They are entitled to the use of the Library, on subscribing the Library Regulations. *No. I. General Regulations of College, &c.*

They are not eligible for Scholarships or Prizes, and do not enjoy any of the other privileges of Matriculated Students; but the Professors may recommend the Council to grant Certificates of Honour to the most distinguished.

STUDENTS FROM OTHER COLLEGES.—Students who have pursued part of their studies in one of the Queen's Colleges, or in any University capable of granting Degrees in the Faculties of Arts, Law, and Medicine, are permitted, on producing testimonials of their College standing and conduct, to take corresponding rank in this College, and to compete for Scholarships of the corresponding year; provided that they shall not hold at the same time a Scholarship, or any other office of emolument, in any other University or College.

RESIDENCES.

There is no accommodation for the residence of students within the College, but it is provided by the Statutes that every Matriculated Student, being under the age of Twenty-one Years, shall reside, during the College Terms, with his parent or guardian, or with some relation or friend, to whose care he shall have been committed by his parent or guardian, or in one of the Boarding-houses licensed by the President of the College and arranged for the reception of students, who are then placed under the moral care and spiritual charge of the Deans of Residences of their respective creeds.

The Terms for Board and Lodging are generally at the rate of from £30 to £40 a year.

The following are the Protestant Deans of Residences:—

<i>Church of Ireland,</i>	Rev. George Webster, D.D.
<i>General Assembly of the Presbyterian Church in Ireland,</i>	Rev. William Magill.
<i>Westeyan Methodists,</i>	Rev. John D. Powell.
<i>Non-Subscribing Presbyterian,</i>	Rev. W. Whitelegge, M.A.

The Deans are designated as they wish themselves to be called.

FEES.

The Fees paid by Students are of two kinds: Collegiate Fees and Class Fees. The following are the regulations concerning the payment of Fees:

1. All Fees are to be paid to the Bursar, at his Office in the College.
2. Candidates for Matriculation are required to pay their *College Fees* before being admitted to Examination.
3. Students must pay their Class Fees before being admitted to the Classes; and if Candidates for Scholarships, must do so on or before the day previous to the date of Examination.
4. Half the Class Fees are returned to Scholars; but this rule does not extend to Exhibitioners.

COMMON FEES.—For the First Year the College Fees are *Ten Shillings*; for the Second and subsequent years *Five Shillings*. Students who wish to borrow books from the Library are obliged to deposit One Pound with the Bursar.

CLASS FEES.—The ordinary fee paid for a course of Lectures is £2. For English and Logic the fee is only £1. For Practical Anatomy, Practical Chemistry, and the first course of Anatomy and Physiology, the fee is £3.

With reference to the Fee payable for repeated attendance on the same Course of Lectures, the following rule has been laid down in the Statutes:—

"The Fees payable by Students, whether Matriculated or Non-matriculated, to the several Professors, for attendance on the several Pass Courses of Lectures or instruction, which are now or may be hereafter prescribed by the College Council, for any Degree or other University distinction, shall be £1 for each Course extending over one Term only, and £2 for each Course extending over more than one Term of a Session, when attended for the first time, and £1 for

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each re-attendance on the same; except that the Fee payable for the Course of Anatomy and Physiology shall be £3 when attended for the first time, and £2 for every subsequent attendance; except also, that the Fee payable for Practical Anatomy or Practical Chemistry, shall be £3 for each attendance."

In the case of Students receiving special instructions, not prescribed as a qualification for a Degree or other University distinction, or attending Honor Courses of Lectures, the Council shall have power to fix the amount of the Fee to be paid by each Student; provided that the Fee to be paid for any Honor Course of Lectures which Students are entitled to substitute for a prescribed Pass Course, shall in no case be less than £2.

LECTURE HOURS.

Table of the Subjects and Hours of Lectures.

Name of the Class.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
Senior Greek, ...	9	9	10	—	9	—
Junior Greek, ...	10	—	9	9	10	—
Extra Greek, ...	—	10	—	10	—	—
Senior Latin, ...	10	—	9	—	10	—
Junior Latin, ...	9	10	10	10	—	—
Extra Latin, ...	—	11	—	11	—	—
English Language, ...	—	11	—	11	—	10
English Literature, ...	—	12	—	12	—	11
History, ...	12	—	12	—	12	—
French, 1st Division, ...	12	—	12	—	12	—
French, 2nd Division, ...	1	—	1	—	1	—
French, 3rd Division, ...	2	—	2	—	2	—
German or Italian, ...	—	2	—	2	—	2
Logic, ...	—	11	—	11	—	9
Metaphysics, ...	—	1	—	1	—	10
Political Economy and Jurisprudence, ...	—	11	11	11	11	—
Senior Mathematics, ...	1	—	1	—	1	—
Junior Mathematics, ...	12	—	12	—	12	—
Third Year's Mathematics, ...	2	—	2	—	2	—
Mathematical Physics, ...	—	—	12	—	12	—
Mathematical Physics (Engineering), ...	2	—	1	—	2	—
Experimental Physics, Senior, ...	11	—	11	—	11	—
Experimental Physics, Junior, ...	—	11	—	11	—	—
Engineering Physics, ...	—	2	—	2	—	—
Physics (Honor), ...	—	12	—	12	—	—
Chemistry, ...	11	—	11	—	11	—
Practical Chemistry, ...	2	—	2	—	2	—
Zoology and Botany, ...	3	—	3	—	3	—
Geology and Mineralogy, ...	—	2	—	2	—	12
Senior Engineering, ...	12	—	12	—	12	—
Junior Engineering, ...	—	10	—	10	—	10
Geometrical Drawing, ...	10	—	10	—	10	—
Office Work (to till 2), ...	—	10	—	10	—	10
Anatomy and Physiology, ...	1	1	1	1	1	—
Practical Anatomy, ...	12	12	12	12	12	—
Medicine, ...	12	—	12	—	—	12
Surgery, ...	—	4	—	4	—	1
Materia Medica, ...	—	3	—	3	—	12
Midwifery, ...	4	—	4	—	4	—
Medical Jurisprudence, Medical, ...	3	—	3	—	3	—
Medical Jurisprudence, Legal, ...	1	1	—	1	1	—
English Law (1st year),†	—	11	11	11	11	—
English Law (2nd year), ...	—	3	3	3	3	—
English Law (3rd year), ...	—	9	9	9	9	—
Jurisprudence, ...	—	1	1	1	1	—
Civil Law, ...	—	4	4	4	4	—
Constitutional and International Law, ...	—	10	10	10	10	—

* Whenever it becomes necessary to divide the Practical Chemistry Class, the hours for the Second Class are at two on Tuesday and Thursday, and eleven on Saturday.

† The hours for the lectures on Law given in the Table are only provisional. The Professor arranges with his class at the first lecture each hours as may be found suitable.

SCHOLARSHIPS, EXHIBITIONS, AND PRIZES.

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No Student is allowed to compete for any Scholarship, Exhibition, or Prize which he has already obtained in a previous Session.

COLLEGE SCHOLARSHIPS.

There are at the disposal of the Council Forty-six Junior and Eight Senior Scholarships.

The former are held by Students who have not yet taken the Degree of B.A.; the latter by Students who have obtained the Degree of B.A.

Of the Junior Scholarships—

Thirty,	of the value of £24 each,	are appropriated to the Faculty of Arts.	(See p. 34).
Five,	„ „ £30 „ „	School of Engineering.	(See p. 46).
Eight,	„ „ £25 „ „	Faculty of Medicine	(See p. 49).
Three,	„ „ £20 „ „	Faculty of Law.	(See p. 43).

Of the Senior Scholarships—

Seven,	of the value of £40 each,	are appropriated to the Faculty of Arts.	(See p. 34).
One,	„ „ £40 „ „	Faculty of Law.	(See p. 43).

All these Scholarships are tenable for only one year, with the exception of the Scholarships of the Second Year in Arts, which are tenable for two years.

Conditions of Candidature and Tenure.

1. Candidates for Scholarships are required to pay on or before the day previous to the date of Examination, the College and Class Fees for the year in the corresponding Faculty. They must also procure a certificate to that effect from the Bursar, and be prepared to show it on their admission to Examination.
2. Scholarships of any year are tenable by Students who have duly completed the previous part of their Course by attending the requisite Courses of Lectures, and passing the ordinary College and University Examinations.
Note.—In the case of candidates for Scholarships in the Faculty of Medicine, in which the Curriculum is not obligatory, the Council reserve to themselves the power to decide in the case of each candidate, whether his previous course of study has been sufficient to render him eligible.
3. A Student, as a rule, cannot hold two Scholarships at once; but if he be a Candidate for both the Junior Scholarships in Arts of the same year, and stand first on each list, he may hold both the Scholarships.
4. Half the ordinary Class Fees are returned to Scholars.
5. Scholars must complete their attendance during the Session, pass the Sessional Examinations, and observe such rules as the Council may from time to time enact.
6. In the Faculty of Medicine, Scholars must attend the Classes recommended for their year of study, in the order of the Curriculum.
7. Junior Scholars shall take charge of the Class-rolls, register the attendance of the Students at lectures, and assist the Professors in the arrangements for the lectures, when required to do so by the Professor, under such regulations as the Council shall prescribe. Senior Scholars and Junior Scholars in Medicine, of the fourth year, shall assist the Professors in such ways and under such regulations as the Council shall prescribe. Senior and Junior Scholars shall carry out the instructions of the Council, in such other reasonable ways as the Council shall prescribe, for the maintenance of discipline and good conduct in the Students, and for the general business of the College.
8. Exhibitioners shall be considered to be subject to the same general rules as Scholars.

Appendix A. TABLE OF THE TIMES AND SUBJECTS OF THE SCHOLARSHIP EXAMINATIONS FOR THE SESSION 1877-78.

No. I.
General
Regulations
of College,
&c.

Examination Days.	From 9 to 12 o'clock.	From 2 to 5 o'clock.
Thursday, October 18th.	Geometrical Drawing. Surveying.	Geology and Mineralogy. Surgery.
Friday, October 19th.	Latin. Chemistry.	Mathematics. Practical Chemistry. Midwifery.
Saturday, October 20th.	Modern Languages. Political Economy. Mathematics (Geometry Paper)*.	Pathology. Latin.
Monday, October 22nd.	Greek. Materia Medica. Medical Jurisprudence.	Greek. Zoology and Botany. Practical Anatomy. History and English Lit. (Senior Scholarship.)
Tuesday, October 23rd.	English Language, History and Geography (1st year). English Language, &c. (2nd and 3rd year.) Natural Philosophy.	Anatomy and Physiology. Logic and Metaphysics.
Thursday, Nov. 29th.	English Law.	Civil Law.

* The University Prizes in Geometry were decided on this paper, which was also taken into account in deciding the first year's Mathematical Scholarships.

COLLEGE EXHIBITIONS AND PRIZES.

The Council are authorized to grant in certain cases Exhibitions to Candidates who may have failed to obtain Scholarships at the Scholarship Examination.

In the last week of October an Examination was held for a Prize in Ancient History. Subjects recommended for study: Rawlinson's Translation of Herodotus (the text only); Liddell's History of Rome; the Students' Gibbon, Chapters 1-3.

In May and June General Examinations in the subjects lectured upon during the Session were held; and Prizes of Books were awarded by the Council to the most distinguished Students in each Class.

Three Exhibitions, each of the value of £15, one in Practical Medicine, one in Practical Surgery, and one in Practical Midwifery, were offered for competition at the close of the Lectures in the Faculty of Medicine for the Session of 1877-78.

UNIVERSITY EXHIBITIONS AND PRIZES.

Exhibitions and Prizes are also given by the Senate of the University to Students, in the Faculties of Arts and Medicine, and in the School of Engineering, who shall most distinguish themselves at the various University Examinations.

FACULTY OF ARTS.—The following are to be competed for immediately after General Matriculation:—

Two Prizes for English Prose Composition and two for Geometry, given annually by the Senate of the University. The First Prize in each is £3 worth of Books; the second £3 worth of Books.

The subjects of Examination for the University Geometry Prizes are—

The first Four and Sixth Books of Euclid, with Definitions of the Fifth Book, and Geometrical deductions.*

These Prizes are open to Students who have just passed the Matriculation Examination for the first time.

Three Exhibitions of £20 a year for three years, three Exhibitions of £15 a year for three years, and two Exhibitions of £10 a year for three years, will be competed for annually in the Faculty of Arts. The three £20 Exhibitions will be awarded to the Candidates who stand foremost in order of merit from

* Instead of the first Four Books of Euclid, candidates may prepare the equivalent course contained in Wilson's Elementary Geometry, 2nd Edition.

each College, at the first University Examination in Arts; and the three £15 Exhibitions to the Candidates who stand second in order of merit from each College: provided that their names appear in the First Class of the Division List at that Examination. Of the two £10 Exhibitions, one will be awarded to the best answerer in Mathematical Science, and the other to the best answerer in the Ancient Classics, at the first University Examination. The £10 Exhibitions are open to the competition of Candidates from all the Colleges, and may be held along with one of the larger Exhibitions.

Each Candidate will be deemed a Student of that College in which he shall have attended the Lectures of the second Session; and no Student will be admitted to the competition who shall have allowed more than one academic year to intervene between the time that he entered upon the studies of the second Session and the time of competition.

The first instalment of each Exhibition will be paid at the time of competition; the second when the Exhibitioner takes the Degree of B.A. in the Queen's University, provided he graduate with honors, and within two academic years; and the third when he takes the Degree of M.A. in the Queen's University, provided he obtain it within three academic years from the time of competition.

UNIVERSITY PRIZES IN COMPOSITION, OPEN TO THE COMPETITION OF GRADUATES AND UNDERGRADUATES.

Two Prizes for English Prose Composition, one of £10 worth of Books, and the other of £5 worth of Books, have been founded, and are open to the competition of all members of the University who shall not have been graduates for more than three years at the time of competition, and who shall not have already twice obtained one or other of these Prizes.

UNIVERSITY PRIZES IN COMPOSITION, OPEN TO THE COMPETITION OF ALL UNDERGRADUATES.

Two Prizes in Composition, one for English Prose, the other for Greek or Latin Prose, and each consisting of £5 worth of Books, have been founded, and are open to the competition of all undergraduates, provided that neither the English nor the Classical Prize be awarded oftener than twice to any Student.

FACULTY OF MEDICINE.—Two exhibitions, one consisting of two instalments of £20 each, and the other of two instalments of £15 each, will be competed for annually in the Faculty of Medicine. These exhibitions will be awarded for proficiency in the non-professional part of the first University Examination in Medicine: the £20 exhibition to the best answerer absolutely, in whichever of the Colleges he may have been educated; and the £15 exhibition to the candidate who is first in order of merit of the competitors from the other two colleges; provided that their names appear in the First Class of the Division List at that examination.

Each Candidate will be deemed a student of that College in which he shall have attended the Lectures of the second session; and no student will be admitted to the competition who shall have allowed more than a year to intervene between the time that he entered on the studies of the second year and the time of competition.

The exhibitions in Medicine will be paid in two equal instalments: one at the time of competition; the other when the exhibitor takes the Degree of M.D. in the Queen's University, provided that he graduate with honors, and within three academic years from the time of competition.

PRIZE IN COMPOSITION, LIMITED TO THE COMPETITION OF UNDERGRADUATES IN MEDICINE.

A prize of £5 worth of books has been founded, for a thesis on a subject to be prescribed, and is limited to the competition of the Undergraduates in Medicine who shall not have already twice received the prize.

The subjects on which the competitors for composition prizes are to write, will be announced on or before the first of June in each year; the compositions, with fictitious signatures, are to be sent in to the Secretary of the University, on or before the first of the following September, and the successful competitors will be declared at the next Public Meeting of the University.

SCHOOL OF ENGINEERING.—Two Exhibitions, one of £20 a year for two years, and the other of £15 a year for two years, will be competed for annually in the School of Engineering. These Exhibitions will be awarded at the first University Examination in Engineering: the £20 Exhibition to the best answerer

Appendix A. absolutely, in whichever of the Colleges he may have been educated, and the £15 Exhibition to the Candidate who is first in order of merit of the competitors from the other two Colleges: provided that their names appear in the First Class of the Division List at that Examination.

No. I.
General
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of College,
&c.

Each Candidate will be deemed a Student of that College in which he shall have attended the Lectures of the second Session; and no Student will be admitted to the competition who shall have allowed more than a year to intervene between the time that he entered on the studies of the second year and the time of competition.

The first instalment of each Exhibition will be paid at the time of competition; the other when the Exhibitioner takes the Diploma in Engineering of the Queen's University, provided that he take honors with it, and obtain it within two academic years from the time of competition.

OTHER PRIZES.

The Early English Text Society's Prizes.

With a view to the encouragement of the study of Early English, the Early English Text Society has kindly offered for the competition of the Students of Queen's College, Cork, valuable prizes consisting of the rare works in Early English published under its auspices.

An examination for these prizes was held on the 23rd of April, 1877, and was open to all Matriculated Students of the College who were not Graduates at that date, the following being the course appointed:—

1. Outlines of the History of the English People, to the accession of Henry IV.
2. The History of English Literature, to the death of Chaucer.
3. Outlines of Anglo-Saxon Grammar (Bask recommended).
4. Morris—English Accidence, Caps. III., IV., and V.
5. Chaucer—The Prologue to the Canterbury Tales.

The New Shakspeare Society's Prizes.

The New Shakspeare Society in order to encourage the study of Shakspeare's works, and of the English Drama, has also offered copies of the works published by it as Prizes for competition among Students of the College.

An examination for these prizes was held on the 23rd April, 1877, and was open to all Matriculated Students of the College who were not Graduates at that date. The following was the course appointed:—

1. The History of the English Drama (in outline).
2. The Literary History of the Elizabethan Age.
3. A critical knowledge of—I. Much Ado about Nothing. II. Richard III. III. King Lear. IV. Timon of Athens.

See Appendix D., pp. 129-130, for the Examination Papers set to Candidates for these Prizes at the last Examination.

DEGREES.

The Certificates, Diplomas, and Degrees granted by the Senate of the Queen's University are as follows:—

In the Faculty of Arts.—

- The Diploma of Associate.
- „ Degree of Bachelor (B.A.)
- „ „ Master (M.A.)

In the Faculty of Law.—

- Certificate of the Law Professors.
- The Diploma in Elementary Law.
- „ Degree of Bachelor (LL.B.)
- „ „ Doctor (LL.D.)

In the Faculty of Medicine.—

- The Degree of Doctor (M.D.)
- „ „ Master in Surgery (M.Ch.)
- „ „ Diploma of Midwifery.

In the School of Civil Engineering.—

- The Degree of Bachelor (B.E.)

NO. II.—FACULTY OF ARTS.

DEGREES.

1. DEGREE OF B.A.*

Students intending to proceed to this degree in the Queen's University must matriculate in one of the Queen's Colleges, and complete the course of study prescribed by the University Senate, by attending the College Lectures in each Session, and passing the Sessional Examinations.

The B.A. Examination takes place in the September after the close of the third Session, and Candidates must have previously passed the "First Examination in Arts," a preliminary examination which takes place at the commencement of the Third Session.

Course for the Degree of Bachelor in Arts.

Candidates for the Degree of Bachelor in Arts are required—

1. To have been admitted Matriculated Students of the Queen's University in the Faculty of Arts.
2. To have subsequently studied in one of the Colleges of the Queen's University the Course herein prescribed.
3. To have passed the University Examinations herein prescribed.

The Course for the Degree of Bachelor in Arts shall extend over three Sessions, and shall comprise attendance on the following curriculum:—

FIRST SESSION.	
English (One Term).	A Modern Continental Language.
Greek.	Mathematics (First Course).
Latin.	
SECOND SESSION.	
Logic (One Term).	Natural Philosophy.
Along with any two of the following:—	
Greek (Second Course).	Modern Continental Languages (Second Course).
Latin (Second Course).	Mathematics (Second Course).
THIRD SESSION.	
English Language and Literature.	Chemistry.
Metaphysics, or History, or Political Economy (Two Terms).	Zoology, or Botany.

Attendance on these Courses shall, in all cases, be understood to include passing such examinations as may be appointed by the College Council, and the catechetical parts of the Courses of Lectures.

Candidates for the Degree of Bachelor of Arts shall reside at their respective Colleges during at least the first two terms of each Session, but may be exempted from residence during the third term by a special grace of the College Council.

Third year's Students may substitute attendance on one or on two Courses of Honor Lectures, for a like number of the Courses above set down for study in the third Session.

Candidates for the Degree of Bachelor in Arts shall pass two University Examinations—a Preliminary and a Degree Examination.

The Course for the Preliminary Examination shall include Greek, Latin, a Modern Continental Language, and Mathematical Science. Students who have completed their second Session must pass this Examination before rising to the third year, unless prevented by illness or other inevitable accident, in which case the Senate may admit them to a Supplementary Examination.

Candidates who have completed the Undergraduate Course, may offer themselves at the Degree Examination for graduation either with Honors or without Honors.

If they seek to graduate with Honors, they may select for their Examination any one of the following groups:—

Greek and Latin.	Experimental Science.
Modern Continental Languages.	Natural Science.
Mathematical Science.	

* Degrees in Arts, conferred by the Queen's University in Ireland, are recognized by the University of Durham, by St. Bee's College, Whitehaven, and by St. Aidan's College, Birkenhead, in the case of Theological Students preparing for Holy Orders in the Established Church.

His Royal Highness the Commander-in-Chief has approved of Graduates of the Queen's University being in future exempted from the usual Examination for direct Commissions; and also of the First University Examination being accepted in lieu of that for the Royal Military College, Sandhurst.

Appendix.

No. II.
Faculty of
Arts.

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Or any three of the following:—

English Language and Literature.
Metaphysics.
History.

Political Economy.
Logic.

Candidates who seek the Degree without Honors, may select for their Examination any group of the subjects from the following lists, provided the sum of the numbers attached in this list to the selected subjects be at least four:—

English Language and Literature, ...	2	Latin, ...	1
Mathematical Science, ...	2	Each Modern Continental Language, ...	1
Experimental Physics, ...	2	Logic, ...	1
Chemistry, ...	2	Metaphysics, ...	1
Zoology, ...	1	History, ...	1
Botany, ...	1	Political Economy, ...	1
Greek, ...	1		

English Composition will form a part of all University Examinations.

2. DEGREE OF M.A.

Candidates for the Degree of M.A. are admitted to the University Examinations for that Degree one year after having taken the Degree of B.A.

Courses for the Degree of Master in Arts.

Bachelors in Arts of one year's standing, may offer themselves for Examination for the Degree of Master in Arts, and may select for their Examination any one of the following groups:—

Greek and Latin.
Modern Continental Languages.
Mathematical Science.

Experimental Science.
Natural Science.

Or any three of the following:—

English Language and Literature.
Metaphysics.
History.

Political Economy.
Logic.

This Ordinance supersedes former Ordinances prescribing the curriculum for the Degree of Master in Arts.

LECTURES.

The Lectures in this Faculty for the Session 1877-78, commenced on *Monday, the 23rd October, 1877.*

The following Table shows the days, hours of Lectures and fees for the ordinary course. In accordance, however, with the regulations of the University for the Degree of B.A., Students may substitute for one or two Courses in the third year a like number of Honor Courses:—

	CLASS.	Tues.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Fest.
First Session.	English, ...	2	—	11	—	11	11	—	£ s. d. 1 0 0
	Greek, ...	1, 2, 3	10	—	9	9	10	—	2 0 0
	Latin, ...	1, 2, 3	9	10	10	10	—	—	2 0 0
	Modern Languages, ...	1, 2, 3	2	—	2	—	2	—	2 0 0
	Mathematics (1st Course), ...	1, 2, 3	12	—	12	—	12	—	2 0 0
	College Fee, ...	—	—	—	—	—	—	—	0 10 0
Second Session.	Logic, ...	2	—	11	—	11	—	9	1 0 0
	Natural Philosophy, ...	1, 2, 3	11	—	11	—	11	—	2 0 0
	Greek (2nd Course), ...	1, 2, 3	9	9	10	—	9	—	2 0 0
	Latin "	1, 2, 3	10	—	9	—	10	—	2 0 0
	Modern Languages "	1, 2, 3	1	—	1	—	1	—	1 0 0
	Mathematics "	1, 2, 3	2	—	2	—	2	—	2 0 0
	College Fee, ...	—	—	—	—	—	—	—	0 5 0
Third Session.	English Language and Literature, ...	1, 2	—	12	—	12	—	—	2 0 0
	Chemistry, ...	1, 2, 3	11	—	11	—	11	—	2 0 0
	Metaphysics, or	1, 2	—	1	—	1	—	10	2 0 0
	History, or	1, 2	—	2	—	2	—	—	
	Political Economy, ...	1, 2	—	11	11	11	—	—	2 0 0
	Zoology or Botany, ...	—	2	—	2	—	2	—	
	College Fee, ...	—	—	—	—	—	—	—	0 5 0

HONOR COURSES.

Appendix A.

By the regulations of the University Senate, a Student of the third year may substitute for two courses in the ordinary curriculum the same number of honor courses.

No. II.
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Under this Regulation Candidates are at liberty to substitute one or two of the following courses for a like number of the courses set down in the above table for study in the Third Session, viz. :—

Greek,	Geology & Physical Geography,
Latin,	French,
Pure Mathematics,	German,
Mathematical Physics,	Italian,
Experimental Physics,	Logic;

provided that the Rules of the College Council admit of their making this substitution, and provided further that the courses substituted are courses specially preparing Students for one or more of the Honor Examinations for the degree of B.A.

Candidates are allowed under the same conditions to attend Honor Courses on two of the subjects, Metaphysics, History, and Political Economy, as two of the courses of the Third Session. Candidates who avail themselves of this permission are at liberty to attend the third of these subjects as another course of the Third Session.

A similar interpretation applies to the courses of Botany and Zoology, which will count as two courses of the Third Session, provided that one of them be an Honor Course, attended under the conditions stated above.

OUTLINES OF THE COURSES OF LECTURES DELIVERED BY THE PROFESSORS
OF THE FACULTY OF ARTS.

LITERARY DIVISION OF THE FACULTY OF ARTS.

The Greek Language.

Professor, R. VAUGHAN BOULGER, M.A.

- Junior Class: Monday, Wednesday, Thursday, and Friday.
Xenophon—Anabasis, Book IV. Euripides—Hippolytus.
Second Year: Monday, Tuesday, Wednesday, and Friday.
Homer—Odyssey, Books I. to VI. Sophocles—Edipus Rex.
Demosthenes—De Corona.
Third Year: Tuesday, Thursday.
Aristophanes—Vespæ. Plato—Gorgias. Thucydides, Book IV.
Exercises in Prose and Verse, according to the proficiency of the Students.

The Latin Language.

Professor, BUNNELL LEWIS, M.A., F.S.A.

- Senior Class, Monday, Wednesday, and Friday:
Cicero—Tusculan Disputations, beginning at Book III, chap. 18.
Terence—Heauton-Timorumenos.
Junior Class, Monday, Tuesday, Wednesday, and Thursday:
Horace—Epistles, Book II.
Cicero—Tusculan Disputations, Book I.
Exercises in both Classes chiefly from Arnold's Introductions to Latin Composition.
Extra and Third Year's Class, Tuesday and Thursday:
Cicero—Pro Sextio.
Plautus—Captivi.

In this Class special attention is paid to original Composition, and to translation from English Authors into Latin.

Appendix.

No. II.
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Arts.

History, the English Language and English Literature.

Professor, GEORGE FRANÇOIS ARMSTRONG, M.A.

- 1st and 2nd } History—Tuesday, Thursday, and Friday.
Term. }
2nd Term } The English Language—Tuesday, Thursday, and Friday.
1st and 2nd } English Literature—Tuesday, Thursday, and Friday.
Term. }

History:

Sessional Course—The History of Great Britain and Ireland, from 1589 to 1815.
Honor Course—The History of Great Britain and Ireland, and of France, from 1589 to 1815.

THE ENGLISH LANGUAGE.

SYNOPSIS—

- I. Earliest Teutonic Conquests in Britain—Character and Habits of the Settlers—Their Language and its affinities—Outlines of English Grammar.
- II. THE KELTIC INGREDIENT—The Celtic Britons: their Character and Habits—Their Language and its affinities—Conquests of the Kymric Kelt by the Romans—The Latin Language in Britain.
- III. THE CLASSICAL INGREDIENT—First Period of Classical Influence—Christianization of the English—Second Period of Classical Influence.
- IV. THE SCANDINAVIAN INGREDIENT—The Danes—Their Character and Habits—Their Conquests and Settlements—Their Language and its affinities—Nature and Extent of the Scandinavian Influence.
- V. THE NORMAN INGREDIENT—The Normans—Their Character and Habits—Their Conquest of Normandy—Growth of Norman Civilization—The Language of Normandy—Its affinities—Its Dialects—The Norman Conquest of England—Direct and Indirect Influence on the Language.
- VI. Old English Dialects—Development of the Literary Language—Chaucer—Special Studies of the English of the *C Canterbury Tales*.
- VII. History of the Language continued to the present day—The Modern English Dialects, &c.

N.B.—A sketch of the History of English Literature, from *Beowulf* to *The Canterbury Tales*, will probably be embraced in this course.

ENGLISH LITERATURE.

History and Criticism of the Literature of England from Chaucer to the present day, with special studies of Selected Works, varying according to the regulations for the University Examinations.

Critical Essays on subjects treated of in the Lectures will be required of the Students at set times.

Modern Languages.

Professor, R. DE VERICOUR, M.A.

French Class (1st Division), Mondays, Wednesdays, and Fridays, at 12 o'clock.
Do. (2nd Division), Mondays, Wednesdays, and Fridays, at 1 o'clock.
Do. (3rd Division), Mondays, Wednesdays, and Fridays, at 2 o'clock.
German or Italian, Tuesdays and Fridays, at 2 o'clock.

TEXT BOOKS.

French—Textes classiques de la Littérature Française, par S.^r Demogeot.
Fables de La Fontaine. Histoire de la Revolution Française, par Mignet.
Histoire de la Littérature Française, par Demogeot. Weekly Lectures on the Grammar and Idioms.
Italian—Silvio Pellico. Tasso. Extracts from Macchiavelli, Guicciardini, Manzoni. Weekly Lectures.
German—Goethe's Ballads and Iphigenie. Schiller's Wilhelm Tell. National-Literatur, von A. F. Villmar. Weekly Lectures.

SCIENCE DIVISION OF THE FACULTY OF ARTS.

Appendix.

No. II.
Faculty of
Arts.*Mathematics.*

Professor, CHARLES NIVEN, M.A.

Junior Class, Monday, Wednesday, and Friday.

Subjects—Arithmetic, Algebra, Geometry, and Plane Trigonometry.

Second Year's Class, Monday, Wednesday, and Friday.

Subjects—Analytical Geometry, Trigonometry, Differential and Integral Calculus.

Third Year's Class:

Subjects—Analytical and Spherical Trigonometry, Elements of the Theory of Equations, Analytical Geometry, Differential Calculus, Integral Calculus.

Exercises are regularly set in each of the Classes.

Logic and Metaphysics.

Professor, GEORGE SIDNEY READ, M.A.

2nd Term, . . . Logic, . . . Tuesday, Thursday, and Saturday.

1st & 2nd Terms, Metaphysics, . . . Do. . . do. . . do.

LOGIC.

This Course consists of:—

- I.—Lectures, Examinations, and Exercises in Aldrich's Compendium of Logic, occupying the early part of the Term, &c.
- II.—A full discussion of Classification, the Theory of Hypothetical Syllogisms and of Induction, and the Analytic of Logical Forms, as contained in the works of Mill, Whately, Thompson, and Baynes.

Throughout the Course the Students will be expected to familiarize themselves with the reduction of arguments to their strict Logical Form by written exercises, which will be examined by the Professor.

METAPHYSICS.

This Course embraces:—

- I.—The Philosophy of the Inductive Sciences, illustrated by reference to Lord Bacon, Whewell, and Mill; and—
- II.—The History of Mental Philosophy, comprising—
 - 1st.—The origin, progress, and development of Modern Philosophy anterior to the rise of the Scottish School.
 - 2nd.—A critical examination of the works of the more celebrated writers of that School.
 - 3rd.—A brief view of the present state of Philosophy in the British Islands and on the Continent.

Political Economy.

Professor, RICHARD HORNER MILLS, M.A.

Political Economy.—The nature and distribution of wealth, the principles which regulate Rents, Profits, and Wages; the Principles of Commerce, of Taxation, of the Funding System, and of Currency and Banking.

Books recommended:—

Adam Smith—Wealth of Nations.

Senior.—Political Economy.

Fawcett's Manual of Political Economy.

John Stuart Mill—Political Economy.

Richard H. Mills—Lectures on Currency and Banking (Second Edition).

Geschen on Foreign Exchanges.

The Course consists of Thirty-two Lectures, delivered in the months of December, February, and March; the Students are required in the intervals to prepare the subjects which will be pointed out by the Professor.

Appendix A.

No. II.
Faculty of
Arts.

Chemistry.

Professor, MAXWELL SIMPSON, B.A., M.D., F.R.S.

Monday, Wednesday, and Friday.

The Course is divided into Inorganic and Organic Chemistry.

In the first part are discussed the Laws of Combination and Affinity, Molecular Chemistry and Crystallography, and the History of the Non-Metallic and Metallic substances.

In the Organic portion of the Course will be considered the subjects of Organic Analysis, Organic Series, Compound Radicals and Types, Metamorphoses of Organic Bodies, History of special Animal and Vegetable Bodies.

In treating of the Laws of Chemistry, and the History of Inorganic and Organic Bodies, those points will be chiefly dwelt upon which have a practical bearing in the Arts, Medicine, Engineering, and Agriculture. Thence, during the Course, attention will be directed to the application of Chemistry to Medicine and Physiology, to Metallurgical Operations, Chemical Manufactures, Dyeing Materials, Soils, Manures.

Fee, for each Sessional Course, £2. Each subsequent Course in Medicine, £1.

Text Books recommended.—Roscoe, Williamson, Fownes, Miller, Regnault, Naquet; Schorlemmer's Chemistry of Carbon Compounds; Armstrong—Organic Chemistry; Galloway—Qualitative Analysis; Bowman—Practical Chemistry.

Analytical Chemistry:

The Chemical Laboratory is open daily, except on Saturdays, from 10 to 4 o'clock, under the superintendence of the Professor, to students desirous of prosecuting an extended course of qualitative and quantitative analysis, and for the purpose of original investigation in connexion with the arts, or in the higher departments of Scientific Chemistry.

Natural Philosophy.

Professor, JOHN ENGLAND, M.A.

Experimental Physics (Senior):

Text Books—Newth's Mechanics; Galbraith and Haughton's Manuals of Astronomy and Optics; Jamin, *Traité de Physique*.

Experimental Physics (Junior):

Text Books—Gassiot, *Traité de Physique*.

Mathematical Physics:

Text Books—Duhamel's *Mécanique*. Parkinson's *Optics*. Brinkley's *Astronomy*.

Engineering Physics:

Text Books—Tate's *Exercises in Mechanics*; selections from the works of Mosely; De Faimour, Weisbach; Twissden's *Practical Mechanics*, &c.

Natural History.

Professor, ROBERT HARKNESS, F.R.S.E. & L., F.G.S.

Monday, Wednesday, and Friday.

The Professor of Natural History delivers a course of Lectures on Zoology and Botany.

Students may obtain Certificates of Attendance on either or both of these subjects. The Zoological part of the course extends from the first Lecture-day in November to the end of February. The Botanical Lectures occupy the remainder of the Session.

Under Zoology will be discussed the Principles of Biology.

ZOOLOGY.

GENERAL ZOOLOGY.—Advantages, data, methods, definition and divisions of the science. Animal morphology and physiology. Systematic zoology.

GENERAL ANATOMY.—The tissues of animals; simple and compound tissues; systems of simple tissues; inner and outer tissues; lower and higher tissues. Indifferent tissues; epithelial tissues; connective tissues; contractile tissues; nervous tissues.

PHYSIOLOGICAL ANATOMY AND SPECIAL PHYSIOLOGY.—The organism, its *Appendix 4.*
 apparatus, organs (composed, simple, and elementary), and physiological
 units. Structure and function; modes of function. The organism, as
 dependent on supplies of matter from without and the action of incident
 forces; transmissions of energy effected by the organism; internal and
 external work. Organs of nutrition; metamorphosis of tissue. Organs of
 assimilation:—the blood; organs of circulation and sanguification; organs
 of respiration; organs of alimentation; organs of secretion. The nervous
 system and organs of sense. Organs of motion and support. Electric
 organs. Organs of generation.

No. II.
 Faculty of
 Arts.

HOMOLOGIES OF ANIMALS.—Type or plan of structure: the relative position
 of parts. Morphological units. Antimeres. Metamerer and parts of meta-
 meres. Layers of the germs and their derivatives. Outgrowths and other
 processes. Anterior and posterior, right and left, dorsal and ventral, neural
 and humal, actinal and abactinal regions.

SYNTHETIC MORPHOLOGY.—Forms of simple animals, as resulting from
 their (a) symmetry, (b) predominant directions of growth, and (c) the pro-
 duction of external processes. Asymmetrical animals. The principal
 modes of animal symmetry:—symmetry of the point, of the line, and of the
 plane; intermediate forms; doubly symmetrical animals. The various
 forms of compound animals.

DEVELOPMENT OF ANIMALS (ONTOGENY).—Embryogenesis and metagenesis.
 Direct development. Development with metamorphosis. Fission. Gem-
 mation. Alternation of generations. Pædogenesis. Other modes of
 development. Ontogeny in relation to animal morphology.

THE HIGHER PHYSIOLOGY.—Law of inheritance. Variation of animals.
 Distribution. Animal Palæontology:—appearance, succession, extinction,
 and persistence of animal groups. Origin of species; phylogeny; relation
 of phylogeny to ontogeny.

ZOOLOGICAL CLASSIFICATION.—Its object, data, difficulties, methods, and
 results. Characters of animals. Groups of animals. Zoological nomen-
 clature. Definition of animal groups. Verification of zoological systems.

INVERTEBRATE ANIMALS.—Protozoa and Metazoa (Cælestera and the higher
 Invertebrata). Classes of Invertebrata:—Rhizopoda, Gregarina, Infusoria,
 Spongia, Hydrozoa, Anthozoa, Ctenophora, Echinodermata, Enteropneusta,
 Gephyria, Nemathelminthes, Rotatoria, Platyelminthes, Annelida, Crus-
 tacea, Insecta, Cephalopoda, Cephalophora (Heteropoda, Gasteropoda,
 Pteropoda and Scaphopoda), Lamellibranchiata, Brachionopoda, and
 Bryozoa. The provinces of the higher Invertebrata:—Echinodermata, Hel-
 minthes, Annelida, Artthropoda, and Mollusca.

VERTEBRATE ANIMALS.—Comparison with invertebrates. Doubtful position
 of Tunicata. Classes of Vertebrates:—Fishes, Batrachians, Reptiles, Birds,
 and Mammals. Provinces of Vertebrata:—Branchiata (or Ichthyopoda),
 Monocotyla (or Sauropsida), and Vivipara.

BOTANY.

GENERAL BOTANY.—The parts of plants; Protoplasm and vegetable cells;
 tissues of plants. Life of plants. Classification of plants. Distribution of
 plants.

CRYPTOGAMIC BOTANY.—Cryptogams: Algae; Mycetes; Mosses and allied
 plants; Vascular Cryptogams. Homologies of Cryptogams.

GENERAL MORPHOLOGY OF PHENOGAMS.—The Stem. Buds and Branches.
 Roots. Leaves. Flowers. The Fruit and Seed. Homologies and develop-
 ment of Phenogams.

SPECIAL MORPHOLOGY OF PHENOGAMS.—Gymnosperms and Angiosperms.
 Dicotyledons—Thalamiflorals; Disciflorals; Calyciflorals; Gamopetalis;
 Apetalis. Monocotyledons—Epigynous Monocotyledons; Apogynous Mono-
 cotyledons.

Those who wish fully to profit by the above Lectures would do well to read,
 before attending them, Huxley's *Lessons in Elementary Physiology*; Mivart's
Lessons in Elementary Anatomy; and Oliver's *Lessons in Elementary Botany*.

GEOLOGY AND MINERALOGY.

Tuesday, Thursday, and Saturday.

General Structure of the Earth; the causes at present in operation which
 modify its surface; Nature of Rocks which enter into composition with the
 crust of the Globe; description and classification of Sedimentary Deposits;

*Subjects of Examination for Literary Scholarships of the
Second and Third Years.*

Appendix.

No. II.
Faculty of
Arts.**The Greek Language:**Sophokles—Oedipus Rex.
Plato—Apologus—Krito.Herodotus, Book II.
Thukydides, Book I.

Prose Composition.

The Latin Language:Virgil—Eclogues and *Æneid*.
Horace.Juvenal—Satires I., III., VIII., X.,
XIII., XIV.

Terence—Heauton Timorumenos.

Livy, Book IV.

Cicero—Tusculan Disputations.

Tacitus—Histories, Book I.

Composition in prose and verse.

The English Language:

Morris—Historical outlines of English Accidence, Chaps. I., II., III., IV., V.

Rask—Anglo-Saxon Grammar, edited by Thorpe.

The English of Chaucer, as illustrated by the Prologue to the Canterbury Tales. Morris's Edition, with the Editor's Introduction.

The History of the English People, to the accession of Henry IV.

English Composition.

The French Language:Molière—*L'Avar*; *Le Misanthrope*.

Lafontaine—Fables.

Histoire de la Littérature Française, par Demogeot.

Translation from English into French.

Subjects of Examination for Science Scholarships of the First Year.

Arithmetic.

Mensuration of Rectilinear Figures and of the Circle.

Algebra:

As far as the Solution of Simple and Quadratic Equations, with one or more unknown quantities. Ratio and Proportion. Arithmetical and Geometrical Progressions. The easier properties of Logarithms. Easy questions in the application of Algebra to Geometry.

Geometry.

Euclid:

First Four Books, or the equivalent course in Wilson's Elementary Geometry (3rd Edition). Euclid, Book VI., and the definitions of Book V.

Trigonometry:

Methods of measuring angles. Definitions of the Trigonometrical Ratios. Values of the Sine, Cosine, &c., of the Simpler Angles. The easier analytical formulae for one or more angles. Solution of Plane Triangles. Problems.

*Subjects of Examination for Science Scholarships of the
Second and Third Years.*

Algebra:

The subjects treated in the First Year's Lectures, including—The Solution of Simple and Quadratic Equations; Ratio, Proportion, and Variation; The Progressions; The Binomial, Multinomial, Exponential, and Logarithmic Series. The Theory and use of Logarithms; Separation of Fractions; Elements of the Theory of Determinants, &c.

Geometry:

The same as for Scholarships of the First Year, with the addition of the first twenty-one Propositions of Euclid, Book XI., and the Elements of the Theory of Similar Figures, and of Transversals.

Analytical Geometry:

Down to and including the Properties of the Ellipse.

Trigonometry:

The subjects treated in the First Year's Lectures, down to and including the Solution of Plane Triangles. Application to heights and distances. Theory of the Circumscribed, Inscribed, and Escribed Circles; and the Theory and Use of Trigonometrical Tables.

*For the Senior Scholarships in the Greek and Latin Languages, and Ancient History.****The Greek Language:**

Homer—Odyssey.

Æschylus—Prometheus, Persæ.

Thukydides, Books III. and IV.

Plato—Republic Books, I. and II.

Composition in Attic Prose and Verse.

History, from B.C. 431 to A.D. 323.

* Where more than one subject enters into the examination for Senior Scholarships, a competent knowledge of all these subjects is required from the successful candidate.

Appendix A.
No. II.
Faculty of
Arts.

The Latin Language:

Virgil.
Horace.
Lucretius, Books I., II.
Ovid—*Fast*, Book I.
Persius.
Terence—*Andria*.
Plautus—*Capteivi*.

Cicero—*De Oratore*.
" *Tusculan Disputations*.
" *Ad Atticum*, Books I., II.
" *Actiones Verrinae*.
Livy—Books IV. and XXII.
Tacitus—*The Annals*, Books I. to IV.
inclusive.

Composition in prose and verse.

For Senior Scholarships in Modern Languages, Literature, and History.

The French Language:

Lavallée—*Histoire des Français*.
Histoire de la Littérature Française, par Demogeot ou Nisard.

The German Language:

National-Literatur, von A. F. Vilmar.
Schiller—*Marie Stuart*.
Goethe—*Iphigenie*.

The Italian Language:

Tasso—*La Gerusalemme Liberata*, first five Cantos.
Dante's *Inferno*—Italian Literature, published by Messrs. Chambers.
Translation from English into French, German, or Italian.

English:

THE ENGLISH LANGUAGE.

The History of the English Language.

ENGLISH LITERATURE.

The History of English Literature during the 17th, 18th, and 19th centuries, with a critical knowledge of—

1. Wordsworth—*Excursion*, Book I.
2. Dryden—*Absalom and Achitophel*.
3. Coleridge—*Collected Poems*.
4. Scott—*Peveril of the Peak*.
5. Shelley—*Adonais*.
6. Lamb—*Essays of Elia*.

History:

The History of England during the 16th and 19th centuries.

For the Senior Scholarship in Mathematics.

The subjects of previous Examinations (for which see page 37), with the addition of the subjects treated in the lectures of the second and third years, including:

Analytical and Spherical Trigonometry.
Theory of Equations.
Differential and Integral Calculus.
Analytical Geometry of Two and Three Dimensions.
Differential Equations.

For the Senior Scholarship in Natural Philosophy.

Duhamel—*Mécanique*.
Brinkley—*Elements of Astronomy*, including the Appendix.
Parkinson's *Optics*.
Everett's Translation of Deschanel's *Natural Philosophy*.

For the Senior Scholarship in Mental and Social Sciences.

The subjects discussed in the Lectures of the Professors, with the following additions:—

Metaphysics and Logic:

Sir William Hamilton's *Philosophical Essays and Notes on Reid*.
Mill—*System of Logic*, Book III. to the end of Volume I.

Political Economy:

Adam Smith—*Wealth of Nations*.
Principles of Political Economy, by John Stuart Mill.
Fawcett's *Manual of Political Economy*.
Senior's *Political Economy*.
Goschen on Foreign Exchanges.
R. H. Mills—*Lectures on Currency and Banking*—second edition.

The value attached to the subjects will be in the following proportions, viz.:—

Metaphysics and Logic 60

For the Senior Scholarship in Chemistry.

Appendix

No. II.
Faculty of
Arts.

Chemical Physics (in Miller's Chemistry).

Inorganic Chemistry:

General principles of Chemical Philosophy. Modern views of Chemistry. Crystallography.

Chemistry of the Metals. Constitution of Salts. Metallurgy.

Organic Chemistry:

Ultimate analysis of Organic Bodies. Recent views of the constitution of Organic Bodies. Empirical and Rational formulæ. Determination of the density of Vapours. Law of Substitution. Homologous Series. Chemical Types. Preparation and Properties of the Alcohol Series and their Derivatives. Cyanogen, its Compounds and Derivatives. Organic Bases of Artificial Origin.

Practical Chemistry:

The Analysis of Mixtures, containing two or more Acids and Bases.

For the Senior Scholarship in Natural History.

The Lectures of the Professors.

Sachs—Text-book of Botany, Books I. and II.

Hooker, J. D.—The Students' Flora of the British Islands (The Characters of the Orders and Tribes).

Huxley, T.—Anatomy of Vertebrated Animals.

Rolleston—Forms of Animal Life (Introduction and description of the Plates).

Lyell—Students' Elements of Geology.

See Appendix A., No. I., p. 26, for the University Exhibitions and Prizes in the Faculty of Arts.

No. III.—SCHOOL OF ENGINEERING.

No. III.
School of
Engineering.

DEGREE IN ENGINEERING.

The course of instruction prescribed in the School of Engineering is intended in the first place, to provide the preliminary scientific training required by the young Engineer; next to give systematic teaching of those branches of practical work, which can be taught in College, viz., Drawing, and the different kinds of Surveying, Levelling, and Mensuration, and lastly, in the third year, together with some illustrations of the practical application of the scientific principles already taught, to give some general outline of the design of the more ordinary work, with which the Engineer is concerned, so that when the Student goes from the College into the office he may be prepared to be of use in doing the work ordinarily expected from pupils of some standing, and also may be better able to profit by the opportunities there afforded to him of gaining a stock of practical knowledge, through his being able to give his undivided attention to them.

Although primarily intended for the education of the Civil Engineer, it will be seen that the Course of Lectures is well adapted to give such a general scientific education as is suitable for the young man intended for manufacturing or business life, more especially if in the third year the mere Engineering portion be replaced by one or more other Courses having a more immediate bearing on the work which the Student purposes to take in hand, as for instance Chemistry, Natural History, &c.; and again, by a similar substitution, the Courses of Lectures can be adapted to the want of those Students who propose to take up a group of chiefly scientific subjects for some of the Competitive Examinations, as for instance, by adding a Course of English Literature and History in the second, or in both the first and second years.

To obtain the Degree in Civil Engineering, Students must matriculate in Engineering, complete the prescribed course in one of the Queen's Colleges, and pass the University Examinations. Of these there are two; the Preliminary Examinations at the commencement of the third Session, and the Final Examination in the following September.

Appendix A.
No. III.
School of
Engineering.

Each Candidate for the Degree in Civil Engineering is required—

1. To have been admitted a Matriculated Student of the Queen's University in the Department of Civil Engineering.
2. To have studied in the Colleges of the Queen's University the Course herein prescribed.
3. To have passed the University Examinations herein prescribed.

The Course for the Degree in Civil Engineering

shall usually extend over Three Sessions, and shall comprise attendance on the following Curriculum:—

FIRST SESSION.

Mathematics (First Course).
Chemistry.
Modern Languages.
Geometrical Drawing.
Office Work.
Mineralogy, Geology, and Physical Geography.

SECOND SESSION.

Mathematics (Second Course).
Experimental Physics.
Civil Engineering.
Office Work.
Field Work.

THIRD SESSION.

Natural Philosophy, applied.
Mathematical Physics.
Civil and Mechanical Engineering.
Office Work.
Field Work.
Engineering Excursions.

Attendance on these Courses shall in all cases be understood to include passing such Examinations as may be appointed by the College Council, as well as the catechetical parts of the Courses of the Lecture.

Engineering Students shall reside at their respective Colleges during at least the first two Terms of each Session, and can be exempted from residence during the third Term also, only by a special grace of the College Council.

The study of the Engineering Curriculum may be extended over more than three Sessions, on the recommendation of the College Council, and under such regulations as the Council shall impose. Some relaxation of the order in which the subjects shall be studied will also be admitted, on the recommendation of the Council.

Candidates will, on the special recommendation of the College Council, be admitted to the Degree after two years' residence instead of three, if their previous acquaintance with a sufficient group of the subjects above set down for study in the First and Second Session is deemed by the Council satisfactory. In such cases the Certificate of the Council will be accepted in lieu of attendances upon these Courses, but will not exempt Candidates from the University Examinations in them.

In order to obtain this Certificate, Students must have attended previously at least one Session in Arts, or one year in an Engineer's office. On making application to the Council, such Students will be allowed to present themselves, at the time of Matriculation, for examination in the subjects of any four of the eight Courses of Lectures of the first two years. On passing this Examination, they will be allowed to take rank at once as Students of the second year, and will then be required to attend those other four Courses of Lectures only, in the subjects of which they have not passed; but they will not be eligible for the Scholarship of that year.

Students in Arts, who have already passed Sessional Examinations in three of the Courses of the first two years, will not be required to pass this Examination, but may make application to the Council to be admitted at once as second year Students, as above. They will also be allowed, by permission of the Council, to postpone their attendance on one of the five Courses of Lectures to the third year, provided it be not one of the subjects required for the First University Examination; they will then not be eligible for Scholarship of the third year, if the Course so postponed be included in the Scholarship Course of the third year.

The application to be admitted to this Examination must be lodged with the Registrar before the first day of the Session, and must state what are the three subjects in which the Students propose to offer themselves for Examination, and must be accompanied by a Certificate of the required attendance of one or more years in Arts or an Engineer's Office.

On passing the Sessional Examinations in the subjects of the five Courses of Lectures which they shall have attended as Students of the second year, they will be promoted to the rank of Students of the third year; and, on completing the regular Course of that year, will be furnished with the Certificate required by the Senate of the University.

The University Examinations shall extend to all the subjects of the above Curriculum. French will, in all cases, be required.

Candidates must present themselves before the close of their Collegiate Course for Examination in the following subjects, viz.:—Mathematics (*First Course*); Experimental Physics; Modern Languages; Geometrical Drawing (including Orthographic Projection, Isometric Projection, Descriptive Geometry, and Linear Perspective); Mathematics (*Second Course*); Mensuration, Levelling, and Mapping.

The final Examination shall extend to all the subjects of the Engineering Course, in which the Candidate shall not have previously passed. English Composition will form a part of each University Examination.

This Ordinance shall take effect from the first day of January, 1860; Students who shall have entered the Engineering Schools of the Colleges of Queen's University previously, may proceed either under the present Ordinance, or under that hitherto in force.

LECTURES.

The Lectures in Engineering commenced on Monday, 22nd October, 1877.

The following Table shows the various Classes which are to be attended in each year, with the corresponding days and hours of Lecture, and the College and Class Fee payable by Engineering Students:—

CLASS.	Term.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Fees.
								<i>£ s. d.</i>
1st Session.	Mathematics (1st Course), . .	1, 2, 5	19	—	19	—	12	— 2 0 0
	Chemistry, ...	1, 2, 5	11	—	11	—	11	— 2 0 0
	Modern Languages, ...	1, 2, 5	2	—	2	—	2	— 2 0 0
	Geometrical Drawing, . . .	1, 2, 5	10	—	10	—	10	— 2 0 0
	Office Work (10 A.M. to 2 P.M.)	1, 2, 5	—	10	—	10	—	2 0 0
	Mineralogy, Geology, and Physical Geography, . . . }	1, 2, 3	—	2	—	2	—	12 2 0 0
	College Fee, ...	—	—	—	—	—	—	0 10 0
2nd Session.	Mathematics (2nd Course), . .	1, 2, 3	2	—	2	—	2	— 2 0 0
	Experimental Physics, . . .	1, 2, 3	—	—	—	—	—	— 2 0 0
	Civil Engineering, ...	1, 2, 3	—	10	—	10	—	16 2 0 0
	*Office Work (10 A.M. to 2 P.M.)	1, 2, 3	—	10	—	10	—	16 2 0 0
	College Fee, ...	—	—	—	—	—	—	0 5 0
3rd Session.	Natural Philosophy, applied, .	1, 2, 3	—	2	—	2	—	— 2 0 0
	Mathematical Physics, . . .	1, 2, 3	1	—	1	1	—	— 2 0 0
	Civil and Mechanical Engi- neering, ...	1, 2, 3	12	—	12	—	12	— 2 0 0
	*Office Work (10 A.M. to 2 P.M.)	1, 2, 3	—	10	—	10	—	16 2 0 0
	College Fee, ...	—	—	—	—	—	—	0 5 0

* For Students who have attended this Course in their first year, the Fee is £1.

OUTLINE OF THE COURSE OF LECTURES ON CIVIL ENGINEERING.

Professor, ALEXANDER JACK, M.A.

FIRST YEAR.

Monday, Wednesday, and Friday.

Subject of Lectures.—Orthographic Projection; Descriptive Geometry; Shadows; Isometric Projection; Perspective; Geometry of the Oblique Bridge; Principles of Architecture.

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Text-books—Hall's Descriptive Geometry; Engineer and Machinist's Drawing Book; Rickman's Architecture; Buck on Oblique Bridges.

SECOND YEAR.

Tuesday, Thursday, and Saturday.

Subject of Lectures—Surveying and Levelling.

Text-books—Rankine's Civil Engineering; Cotton's Manual of Railway Engineering; Williams' Geodesy.

THIRD YEAR.

Monday, Wednesday, and Friday.

Materials used in Construction; Principles of Construction of Bridges, Roads, Railways, Canals; Hydraulic Engineering; Strength of Materials; Principles of the Construction of the different Machines employed by the Engineer.

DRAWING OFFICE.

Attended by all the Classes—Tuesday, Thursday, and Saturday.

The First Year's Class are chiefly employed in drawing the problems given at lectures, and a few easy examples of their applications. The Second and Third Years' Classes, in making working drawings of examples of the subjects of lectures, and in Mapping.

Practical Instruction in the Field in the use of Surveying Instruments is given during the Session.

For an outline of the other courses of lectures in the above table to be attended by Engineering Students, see Appendix No. II., p. 29, *et seq.*

SCHOLARSHIPS.

In the School of Engineering there are five Scholarships, two of which are appropriated to Students of the first year, two to those of the second, and one to those of the third. (See also p. 23.)

SUBJECTS OF EXAMINATION.

The Subjects of Examination for the Engineering Scholarships are as follows:—

Subjects of Examination for Engineering Scholarships of the First Year.

Arithmetic:

Mensuration of Rectilineal Figures and of the Circle:

Algebra:

As far as the Solution of Simple and Quadratic Equations, with one or more unknown quantities. Ratio and Proportion. Arithmetical and Geometrical Progressions. The easier properties of Logarithms. Easy questions in the application of Algebra to Geometry.

Euclid:

First Four Books, or the equivalent course in Wilson's Elementary Geometry (3rd Edition), Euclid, Book VI., and the Definitions of Book V.

Trigonometry:

Methods of Measuring Angles. Definitions of the Trigonometrical Ratios. Values of the Sine, Cosine, &c., of the Simpler Angles. The easier analytical formulae for one or more angles. Solution of Plane Triangles. Problems.

Subjects of Examination for Engineering Scholarships of the Second Year.

Mathematics:

The same as for Science Scholarships in Arts of the Second Year, except that Spherical Trigonometry will be substituted for Analytical Geometry.

French:

Demogeot—Histoire de la Littérature Française.

Translation from English into French.

Chemistry:

Laws of Combination and Affinity. Preparation and Properties of the chief Organic Substances. Metallurgical Operations. Mortars and Cements.

Geometrical Drawing:

Descriptive Geometry. Orthographic Projection. Isometric Projection. Perspective Geometry of Oblique Bridge.

*Subjects of Examination for Engineering Scholarships of the Third Year. Appendix A.***Mathematics:**

Algebra—Theory of Equations and Methods of Approximation. Elimination. Summation of Series. Binomial and Exponential Theorems. Scales of Notation, &c.

No. III.
School of
Engineering.

Trigonometry—Plane and Spherical, with Astronomical applications. Analytical Geometry, and Geometrical Conic Sections.

Differential Calculus—Involving demonstrations of the rules for differentiating Algebraic, Circular, and Exponential Functions, founded upon a clear statement of the nature of Limits and Definition of a Differential coefficient. Taylor's and Maclaurin's Theorems. Maxima and Minima. Criteria of the same, with proofs. Equation of Tangent, Normal, Evolute, &c.

Integral Calculus, including more particularly Rational Fractions, Binomial Differentials, Areas of Curves, Rectification of Curves, Cubature of Solids of Revolution.

Natural Philosophy:

Newth's Mechanics.

Gassé—*Traité de Physique*—Books VI, VII, VIII, IX.

Geology and Mineralogy:**Civil Engineering:**

Instruments used by the Civil Engineer. Their adjustments and use. Surveying. Levelling.

See Appendix No. I. p. 27, for the University Exhibitions in Engineering.

NO. IV.—FACULTY OF LAW.

No. IV.
Faculty of
Law.

DEGREES.

Candidates for the Diploma of Elementary Law must have passed a Matriculation Examination, and pursued the following

*Course of Study for the Diploma of Elementary Law.***FIRST SESSION.**

Law of Real Property, Principles of Conveyancing; Jurisprudence.

The Course of the Professor of English Law for the First Year's Class comprises the history of the Law of Real Property, with Elementary Instruction in the Law relating to Land, the Practice of the Courts in relation to it, and the principles regulating Practical Conveyancing. The text-book read is "Williams on Real Property."

The following works are recommended for perusal:—

Blackstone's Commentaries, by Stephen, Vol. I., and Vol. II. of Kerr's edition of the same work.

SECOND SESSION.

Law of Personal Property, Equity, and Bankruptcy; Civil Law.

The Course of the Professor of English Law for the Second Year's Class comprises instruction in the Law of Personal Property, its incidents, and the procedure relating to it: in the principles of the Law of Contracts and the practice in relation to it; and in the history of the creation of the Equitable jurisdiction, as administered under the Supreme Court of Judicature Act (Ireland), 1877, the principles which regulate its action, and the procedure in relation thereto. The text-books read are, "Smith on Contracts," "Williams on Personal Property," and Snell's "Principles of Equity."

The following are recommended for perusal:—

Blackstone's Commentaries, by Stephen, Books iii. and v. (vols. ii., iii.); same work, by Kerr, Vol. iii.; Smith's "Mercantile Law;" Smith's "Manual of Equity;" Story's "Equity Jurisprudence," vol. i.; "The Supreme Court of Judicature Act (Ireland), 1877," the Rules made for carrying same into effect; Kinsley on the Bankruptcy Acts, 1857 and 1872; the Debtors Act, 1872.

THIRD SESSION.

Common and Criminal Law.

The Course of the Professor of English Law for the Third Year's Class comprises the History, and Constitution of, and the Jurisdiction exercised in the Queen's Bench, Common Pleas, and Exchequer Divisions of the High Court of Justice, with instruction on the subjects of Criminal Procedure, &c. The text-books are the third and fourth volumes of Blackstone's Commentaries, editions by Stephen and Kerr.

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Law.

The following works are recommended for perusal:—

Broom's "Common Law," Broom's "Legal Maxims," Smith's "Leading Cases," "Coppinger's County Courts," by Johnstone, Common Law Procedure Acts, 1863 and 1866, &c., by Bewley and Nash; The Supreme Court of Judicature Act (Ireland), 1877, the Rules made for carrying same into effect; Woolrych's Criminal Law, or Russell on Crimes.

Candidates for the Degree of LL.B. will be admitted to Examination for that Degree from the Queen's University in Ireland, provided they shall have proceeded to the Degree of A.B., and shall have attended the Lectures and passed the Examinations prescribed for the Diploma of Elementary Law.

Students who have obtained the Degree of LL.B. will, at the expiration of two years after they have obtained the Degree, be admitted to the Examination for the Degree of LL.D. They are examined in the Laws of the Admiralty and in International Law, for which Examination the following Books are suggested:—

Lord Hale's Treatise, De Jure Maris.

Dr. FitzHenry Townsend's statement of the differences in Jurisdiction and Practice between the English and Irish Courts of Admiralty, annexed to the Report of the Royal Commission of Inquiry, 1866.

Boyd's Admiralty Practice.

Lord Tenterden on Merchant Ships (by Shee).

Wheaton's International Law.

"Historicus," Letters of, on International Law.

May's Constitutional History.

Hallam—Constitutional History.

Broom—International Law.

LECTURES.

The complete Course for each Class consists of Twenty-four Lectures, by the Professor of English Law, in each Collegiate Session of three years, and of Twenty-four Lectures by the Professor of Jurisprudence, in each course of the first two years. The Lectures are delivered after Michaelmas Law Term, in the month of December, and after Hilary Law Term, in the months of February and March. Five-sixths of the Lectures in each Course must be attended.

Students proceeding to the Irish Bar, if they be Graduates in Arts of the Queen's University, and have attended for one year the Lectures, and passed the Examinations of the Professors of Law in any of the Queen's Colleges, will under the rules made by the Benchers of the King's Inns in Trinity Term, 1876, be required to attend but for one year at the Lectures, and on two only of the Professors of the King's Inns.

Students proceeding to the Irish Bar, who are not Graduates in Arts of the Queen's University, but have for one year attended the Lectures of the Professors of Law in any of the Queen's Colleges, will be required to attend for two years at the Lectures of the Professors of the King's Inns.

Graduates, or Undergraduates, are excepted from the operation of the Benchers' rule requiring Law Students to pass an examination in the English Language and Literature, and the Latin Language.

With respect to Students for the English Bar, the Council of Legal Education may accept a Degree in Law granted by the Queen's University, as an equivalent for the Examination to be passed in any of the following subjects, viz.:—Roman Civil Law; the Law of Real and Personal Property; provided the Council is satisfied that the Student, before he obtained his Degree, passed a sufficient Examination in such subject or subjects.

Students preparing for the profession of Attorney or Solicitor in Ireland, can save two years of their apprenticeship by taking the Degree of B.A. or of LL.B., in the Queen's University.

Students intending to proceed, so as to entitle themselves to serve an apprenticeship of four years instead of five, under the Attorneys and Solicitors Act, Ireland, 1866 (29 & 30 Vic., c. 84, s. 9), must enter their names with one of the Registrars of the Queen's Colleges of Cork, Belfast, or Galway, and pay the necessary College and Class Fees to the Bursar before the commencement of the Law Lectures in each Session. Such Students need not pass the Matriculation Examination, but must attend the Lectures, and pass the College Examinations prescribed for the first and second years, of the course of study

for Candidates for the Diploma in Elementary Law. If apprenticed after the 16th of April, 1874, one, at least, of the two Collegiate years of Lectures must have been attended previously to being articled, and the Examination passed at the end of such year; the second year's Lectures may be attended, and the Examination passed during the period of service.

SCHOLARSHIPS.

Subjects of Examination.

FIRST YEAR.

Examination by the Professor of Jurisprudence:—

- Reddie's Inquiries in the Science of Law.
- Adam Smith's Wealth of Nations—Book III.
- Hallam's Middle Ages—Chapters 2 and 8.

Examination by the Professor of English Law:—

- Williams—Principles of the Law of Real Property.

SECOND YEAR.

By Professor of Jurisprudence.

- The Lectures of the Professor in the First Year.
- Ancient Law, by H. S. Maine.
- The Chapters on Social Sciences in J. S. Mill's Logic—Book VI., Chap. 6, to end of the Book.
- Austin's Jurisprudence, Vol. 1, 3rd Edition.

By Professor of English Law.

- The Lectures of the Professor for the preceding year.
- Snell—Principles of Equity.
- Williams—Principles of the Law of Personal Property.
- Smith—On Contracts.

THIRD YEAR.

By Professor of Jurisprudence.

- Austin's Jurisprudence, Vol. 2, 3rd Edition.
- Sandar's Justinian, and the Lectures of the Professor in the first and second years.
- Norm.—The following works, in addition to the text-books mentioned, should be referred to in connexion with the principal subjects discussed in the Lectures on Jurisprudence:—

- Danmont's Bentham (translation by Hildreth), "Principles of Legislation," and 1st and 2nd parts of the "Principles of the Civil Code."
- Stephens' "Criminal Law."
- Digby's Introduction to the Law of Real Property.
- Maine's Early History of Institutions.
- " Village Communities.
- Mackenzie's Roman Law.

By Professor of English Law.

- The Lectures of the Professor for the preceding years.
- Smith—Leading cases on branches of the Law.
- Story—Equity Jurisprudence.

The Senior Law Scholarship will be awarded, by Examination, to the most distinguished Student who shall have proceeded in the Course of Arts to the Degree of A.B., and who shall have completed the Course of Legal Study prescribed to Candidates for the Degree of LL.B. in the Queen's University in Ireland.

Examination for the Senior Scholarship in Law.

The Lectures of the Professors and subjects appointed for Scholarship Examination in the preceding years.

- Dart—The Law of Vendors and Purchasers.
- Furlong—Law of Landlord and Tenant.
- Taylor—Treatise on the Law of Evidence.
- Stephen—Treatise on the Principles of Pleading, taken in connexion with the Judicature Act, 1877.
- Stephen—Commentaries, Books V., VI.
- Hallam—Constitutional History.
- Broom's Constitutional Law.
- May's Constitutional History.

NO. V.—FACULTY OF MEDICINE.

DEGREES OF M.D. AND M.CH.

Students who wish to obtain the Degree of M.D., or of M.Ch. in the Queen's University, must be matriculated Students of one of the Queen's Colleges, and must pursue the courses of study prescribed by the Senate of the University.

No. V.
Faculty of
Medicine.

Appendix A.
No. V.
Faculty of
Medicine.

Medical Students may matriculate either at the General Matriculation Examination (held in 1874, on the 20th of October), or at the Supplementary Examination held in the second or third week of November.

The following are the Regulations of the Senate concerning these Degrees:—
Each Candidate for the Degree of Doctor in Medicine or Master in Surgery is required—

1st.—To have passed in one of the Colleges of the Queen's University the Entrance Examination in Arts, and to have been admitted a Matriculated Student of the University.

2nd.—To have attended in one of the Queen's Colleges, Lectures on one Modern Continental Language for six months, and Lectures on Natural Philosophy for six months.

3rd.—To have also attended, in some one of the Queen's Colleges, at least two of the courses of Lectures marked with an asterisk. For the remainder of the courses, authenticated certificates will be received from the Professors or Lecturers in Universities, Colleges, or Schools, recognised by the Senate of the Queen's University in Ireland.

4th.—To pass three University Examinations—the First University Examination, the Second University Examination, and the Degree Examination.

The Curriculum shall extend over at least four years, and shall be divided into periods of at least two years each.

Candidates are recommended to pass the Matriculation Examination prior to entering on the second period.

It is recommended that the first period shall comprise attendance on the following Courses of Medical Lectures:—

- * Chemistry.
- * Botany, with Herborizations for practical study, and Zoology.
- * Anatomy and Physiology.
- * Practical Anatomy.
- * Materia Medica and Pharmacy.

And that the second period shall comprise attendance on the following Courses of Medical Lectures:—

- Anatomy and Physiology (Second Course).
- Practical Anatomy (Second Course).
- * Theory and Practice of Surgery.
- * Midwifery.
- * Theory and Practice of Medicine.
- * Medical Jurisprudence.

In addition to the above Courses of Lectures, Candidates shall have attended during either the first or second period—

- A Modern Continental Language (in one of the Colleges of the University).
- Experimental Physics (in one of the Colleges of the University).

Also, during the first period—

- Practical Chemistry (in a recognised Laboratory).
- Medico-Chirurgical Hospital (recognised by the Senate) containing at least sixty beds, together with the Clinical Lectures therein delivered, at least Two each Week—a Winter Session of Six Months.

And during the second period shall have attended—

- Practical Midwifery, at a recognised Midwifery Hospital, with the Clinical Lectures therein delivered—for a period of Three Months; or of having attended a Midwifery Dispensary for the same period; or of having attended ten cases of Labour, under the superintendence of the Medical Officer of any Hospital or Dispensary where cases of Labour are treated.
- A Medico-Chirurgical Hospital (recognised by the Senate) containing at least sixty beds, together with the Clinical Lectures therein delivered—Eighteen Months; including either three Winter Sessions of Six Months each, or two Winter Sessions of Six Months each, and two Summer Sessions of Three Months each.

* The regulations under which degrees in Surgery will be conferred on Candidates who graduated in Medicine before the year 1865, may be learned on application to the Secretary of the Queen's University.

Medical Examinations are held in June, and in September and October.

The June Examinations are Pass Examinations, and commence on the Tuesday following the Second Saturday in June.

The Honor Examinations commence on the last Tuesday in September, and are followed by Pass Examinations.

Each Candidate for Examination in June must forward to the Secretary, on or before the first of June, notice of his intention to offer himself as a Candidate along with his Certificates; and each Candidate for Examination in September or October must forward similar notice, along with his certificates.

Appendix.

No. V.
Faculty of
Medicine.

LECTURES.

The Lectures in this Faculty began on Thursday, the 2nd November, 1876.

The following Curriculum is recommended for all Medical Students; the days and hours of Lecture and the Fees are shown in the table:—

CLASS.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Fees.	
							£ s. d.	£ s. d.
1st Year.								
Practical Anatomy, . . .	12	12	12	12	12	—	3 0 0	
French, ...	1	—	1	—	1	—	2 0 0	
Natural Philosophy, . . .	—	11	—	11	—	—	2 0 0	
Natural History, ...	3	—	3	—	3	—	2 0 0	
Chemistry, ...	11	—	11	—	11	—	2 0 0	
College Fee, ...	—	—	—	—	—	—	0 10 0	
								11 10 0
2nd Year.								
Anatomy & Physiology, . .	1	1	1	1	1	—	3 0 0	
Practical Anatomy, . . .	12	12	12	12	12	—	3 0 0	
Practical Chemistry, . . .	2	—	2	—	2	—	3 0 0	
Materia Medica, ...	—	3	—	3	—	12	3 0 0	
College Fee, ...	—	—	—	—	—	—	0 5 0	
								11 5 0
3rd Year.								
Practical Anatomy, . . .	12	12	12	12	12	—	3 0 0	
Anatomy & Physiology, . .	1	1	1	1	1	—	3 0 0	(If a 2nd Course.)
Midwifery, ...	4	—	4	—	4	—	3 0 0	
Surgery, ...	—	4	—	4	—	1	3 0 0	
College Fee, ...	—	—	—	—	—	—	0 5 0	
								9 5 0
4th Year.								
Medical Jurisprudence, . .	3	—	3	—	—	3	2 0 0	
Medicine, ...	1	—	1	—	—	12	2 0 0	
College Fee, ...	—	—	—	—	—	—	0 5 0	
								4 5 0

The Course of PRACTICAL ANATOMY was conducted by the Professor of Anatomy and Physiology, assisted by Demonstrators.

The Anatomical Demonstrations

commenced on 2nd of November, and were continued daily at Twelve o'clock, except Saturdays.

NOTE.—All the Lectures are recognised by the Queen's University in Ireland, by the Universities of London, Glasgow, Aberdeen, and St. Andrew's; the Colleges of Surgeons of Dublin, Edinburgh, and London; by the Apothecaries' Companies; by the Army, Navy, and East India Medical Boards, &c., &c.

HOSPITAL ATTENDANCE.

Clinical Lectures on Medicine and Surgery are delivered at the North and South Infirmarys, by the Physicians and Surgeons of those Institutions.

Fee for twelve months, ... £ s. d.
8 8 0

Fee for six months, ... 5 5 0

Practical Pharmacy at the same Infirmarys:

Fee for three months, ... 3 3 0

Clinical Midwifery at the Lying-in Hospital, with Practical Attendance upon Thirty Midwifery cases:

Fee for six months, ... 3 3 0

Further information may be had from the Medical Officers at the Infirmarys.

Appendix. OUTLINES OF THE COURSES OF LECTURES DELIVERED BY THE PROFESSORS
IN THE FACULTY OF MEDICINE.

No. V.
Faculty of
Medicine.

Anatomy and Physiology.

Professor, J. J. CHARLES, M.A., M.D.

Anatomy and Physiology :

This Class meets on Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays, at One o'clock, P.M., and occasionally on Saturdays, at Ten o'clock, A.M.

The Course comprises :

- (1.) Histo-Chemistry. (2.) Histology. (3.) The Anatomy and Physiology of the Organs of Digestion, Respiration, Circulation, Excretion, and Reproduction. (4.) The Anatomy and Physiology of the Lymphoid Organs, also the Brain, Spinal Cord, Organs of Special Sense and Voice. (5.) Embryology, including a description of the development of the principal organs. The lectures are amply illustrated by diagrams, plates, models, moist and dry specimens from the Anatomical Museum, Microscopic preparations, recent dissections and experiments. As the subjects embraced in this course cover a very extensive field, a few of them are treated of only in alternate Sessions.

The SENIOR DIVISION of the class, in addition to attendance on the ordinary lectures, meets specially every Thursday, after the Christmas recess, for the consideration of the higher portions of the course. *Oral Examinations* are frequently held, usually on Wednesday or Saturday. There are also *Written Examinations* immediately after Christmas, as well as at the close of the Session.

TEXT-BOOKS—Quain's Anatomy and Kirke's Physiology. Senior Students should read in addition:—Foster's Physiology. For consultation:—Carpenter's Human Physiology. Hermann's Physiology, Gray's Histology.

Histology and Practical Physiology :

Instruction in this department is given in the *Physiological Laboratory*, which is provided with microscopes, and the apparatus necessary for performing experiments on Circulation, Respiration, Innervation, &c.

TEXT-BOOKS—Foster's Practical Physiology and Schüfer's Practical Histology. For Senior Students—Handbook for Physiological Laboratory, by Dr. Burdon Sanderson, Klein, &c.

Practical Anatomy :

The *Anatomical Demonstrations* are given on five days in the week by the Senior Demonstrator, and occasionally by the Professor of Anatomy.

The Course includes :

- (1.) The Descriptive Anatomy of the Bones and Ligaments. (2.) The Topographical Anatomy of the Thorax, the Abdomen, and the Limbs, Head, and Neck.

Three *Prosectors* are appointed annually from amongst the more deserving students.

SENIOR DIVISION OF THE CLASS.

The Professor of Anatomy has a special meeting of the senior division of the class every Wednesday, at 11 A.M., when the more abstruse subjects of the course are discussed.

JUNIOR DIVISION OF THE CLASS.

The Junior Demonstrator meets the junior students every Wednesday at 10 o'clock, A.M., for special instruction in Osteology.

The *Dissecting Room* is open from Nine o'clock, A.M., till Four o'clock, P.M., daily, and the dissections of the students are superintended by the Professor, Demonstrators, and Prosectors of Anatomy.

The Lectures and Demonstrations are illustrated by recent dissections, diagrams, plates, and osteological specimens.

TEXT-BOOKS—Ellis's Demonstrations and Quain's Anatomy. For Students preparing for any of the Colleges of Surgeons—Heath's Manual of Dissections. For consultation:—Holden or Wagstaff's Osteology; Gray's Anatomy; Holden's Medical and Surgical Landmarks; Cruveilhier's Anatomy.

Theory and Practice of Medicine.

Professor, D. C. O'CONNOR, B.A., M.D.

Appendix.

No. V.
Faculty of
Medicine.

This class meets on Mondays and Wednesdays, at one o'clock, P.M., and on Saturdays at twelve, noon.

The subjects of the Course are treated of in the following order :

Fever—Intermittent, Remittent, Typhus, Typhoid, Relapsing. *Eranthematous Diseases*—Scarlatina, Rubella, Variola, Varioloid, Varicella, Vaccination, Diphtheria, Cholera, Purpura, Scorbatus, Erysipelas, Rheumatism. *Cerebral Diseases*—General considerations, causes—remote and proximate, Meningitis, acute and chronic Hydrocephalus, Cerebritis, "Ramollissement," Apoplexy. *Spinal Diseases* in the same order. *Palsy*—general and partial. *Diseases of Sensibility*—Hyperæsthesia and Anæsthesia. *Diseases of Motility*—Hysteria, Chorea. *Diseases of the Respiratory Organs*—Laryngitis, Croup, Bronchitis, Pneumonia, Pleuritis, General Observations on Tubercle and Scrofula, Tubercular and other forms of Phthisis. *Diseases of the Heart, &c.*—Pericarditis, Endocarditis, Valvular Disease, Hypertrophy, Dilatation, Fatty Degeneration, Phlebitis, Blood Poisoning in general, Aneurism. *Diseases of the Alimentary Canal*—Dyspepsia, Gastritis, acute and chronic, Ulceration of the Stomach, Cancer, with general observations on Cancer, Sporadic Cholera, Flux, Dysentery, Diarrhoea, Tabes Mesenterica, Veruca. *Diseases of the Liver*—Icterus, Hepatitis, acute and chronic; Cirrhosis, Fatty and Waxy Liver. *Diseases of the Kidneys, &c.*—Diabetes, acute and chronic; Nephritis, Bright's Disease.

Theory and Practice of Surgery.

Professor, W. K. TANNER, M.D., F. & L.R.C.S.I.

This Course comprises:

The Principles and Practice of Surgery, also a special course of Operative Surgery, which will be demonstrated on the Subject.

During the Session will be discussed:—

- I.—Elementary Diseases, under which are classed, constitutional affections, such as Pervers, Cachectic Diseases, and those of the nervous system; Inflammatory Action and Congestion. The healing process, Suppurations, Ulcers, Mortification, Hypertrophy, Atrophy, and Absorption, Tumours and Haemorrhage.
- II.—Morbid Action in certain Tissues, under which are classed—Affections of the Integument of Serous and Mucous Membranes, of Periosteum and Bone, of Joints, Arteries, Veins, Lymphatics, and Nerves.
- III.—Injuries, under which heading are comprised—Wounds, Effects of Heat and Cold, Fractures, Dislocations, Sprains, and Ruptures of Muscles and Tendons, Bruises, and Suspended Anelation.

The treatment of the above will be fully described, and the lectures illustrated by plates, diagrams, pathological and microscopical specimens, together with the instruments and surgical appliances employed.

Text-books recommended—Holmes' Principles and Practice of Surgery—Bryant's Practice of Surgery—Science and Art of Surgery (Erichsen).

Midwifery.

Professor, JOSHUA R. HARVEY, B.A., M.D.

This class meets on Mondays, Wednesdays, and Fridays, at four o'clock, P.M.

The Course includes :

- I.—Introductory Sketch of the function of reproduction in animals.
 - II.—The anatomy, physiology, and morphology of the generative organs.
 - III.—Impregnation, and its results; development and growth of the Embryo.
 - IV.—Pregnancy, its phenomena, signs, variations, and diseases; sterility, impotence.
 - V.—The Pelvis, its relations, deviations, and deformities.
 - VI.—Labour, its causes, classification, &c.; the physiology, mechanism, phenomena, and management of Labour, natural, unnatural, and complex, including abortion, *Post-partum* condition, natural and morbid.
- Management of Infants.

Appendix.

No. V.
Faculty of
Medicine.

Materia Medica.

Professor, MATTHIAS O'KEEFE, M.A., M.D.

This class meets on Tuesdays and Thursdays at three o'clock, P.M., and on Saturdays at twelve o'clock. An Examination is also held on Saturday.

The Course, which extends over six months, and about sixty-four lectures, includes:

An introductory address, classification of medicines, based on the physiological action, verified or corrected by the result of clinical experience; a description of the physical and chemical characters of the drugs enumerated in the British Pharmacopœia, and of other non-official drugs of recognised therapeutic value; an examination of the purity of the specimens supplied to the College Museum, by the application of the tests recommended by the British Pharmacopœia, and of other tests; exhibition to the class of specimens of the various drugs and medicinal preparations, dried and fresh medicinal plants, and coloured plates; physiological action of the more important remedies, with occasional experiments on animals to illustrate this action. Therapeutic uses of drugs, special attention being given to doses and modes of administration, the latter being illustrated by the writing of prescriptions on the black board; the medical and surgical uses of the various forms of electricity, illustrated by a full set of apparatus; practical exercises of the class on the medical plants growing in the Botanic Garden. The course terminates with an Honor Examination, at which prizes are awarded.

TEXT-BOOK:—The only text-book adopted is the British Pharmacopœia. In the therapeutic department of the Library there is a choice selection of works to which students are referred.

Medical Jurisprudence.

MEDICAL PART.

Lecturer, MATTHIAS O'KEEFE, M.A., M.D., Professor of Materia Medica.

The lectures on this subject are given on Mondays, Wednesdays, and Saturdays, at three o'clock, P.M.

The Course opens with an introductory lecture, and the subjects are treated under the following heads:

Signs of Death—Examination of the dead body, *rigor mortis*, the various conditions which modify it, its medico-legal application, putrefaction, forms and progress of putrescence; various kinds of violent death—hanging, drowning, injuries, &c.; their signs; are they accidental, homicidal, or suicidal? Examination of bloodstains (in which the class is practically exercised), of hair, &c. *Disputed Sexual Relations*—legitimacy, pregnancy, infanticide, abortion, &c. *Disputed results of bodily injuries*. *Disputed Mental Aberration*, Toxicology, including classification of poisons: the more important poisons are given to animals (chloroform being used where the least pain is inflicted, as with the irritants and corrosives), and the post-mortem appearances produced exhibited; tests for the various poisons shown, and the poison extracted from the viscera, or other organic matter by the lecturer, assisted by as many of the class as wish to work practically at the subject, in the special Laboratory for Materia Medica and Medical Jurisprudence. The course concludes with an Honor Examination, at which prizes are awarded.

LEGAL PART.

Lecturer, MARK S. O'SHAUGHNESSY, Professor of English Law.

The part of the Course, delivered by the Professor of English Law, consists of twelve Lectures, in which are treated:—

- I.—Subjects relating to Forensic Medicine considered as—1. Questions affecting the civil right or social duties of individuals. 2. Injuries to property. 3. Injuries to person; and the state of the law in respect to subjects coming under these heads, including the practice in lunatic matters, life assurance, criminal responsibility, &c., is explained.
- II.—In relation to Medical Police, the subjects treated of are considered as regards—1. Questions affecting the preservation of individuals. 2. Which relates to those collected into communities. Under this head the statutes relating to Public Health in Ireland are explained.

The law relating to the subjects treated of is illustrated by references to cases in which matter appropriate to the subject under consideration can be pointed out and their applicability explained, and points requiring the particular attention of medical men are suggested.

SCHOLARSHIPS.

There are Eight Scholarships in the Faculty of Medicine, which are thus allotted:—

- To the First Year—Two—One for Literature and one for Science.
 " Second do. Two.
 " Third do. Two.
 " Fourth do. Two.

Appendix.

No. V.
Faculty of
Medicine.

SUBJECTS OF EXAMINATION.

Scholarships of First Year.

1. LITERARY SCHOLARSHIP.

The Greek Language:

Homer—Odyssey, Books IX. to XII., inclusive.

Euripides—Hecuba.

Demosthenes—Olynthiac Oration.

Xenophon—The Anabasis, Books III., IV., V.

Prose Composition.

The Latin Language:

Virgil—First Six Books of the *Æneid*, the *Georgics*.

Horace—First Two Books of the *Odes*, the *Satires*, and the *Epistles*, Books

I., II.

Cicero—De Senectute; De Amicitia.

Sallust—Conspiracy of Catiline and Jugurthine War.

Cæsar—The Gallic War, Books V., VI.

Latin Prose—Re-translations from English into Latin of portions of Cicero.

N.B.—The Examination in Greek and Latin will be conducted partly *à vue*, and partly by printed questions.

The English Language:

Original Essays on subjects proposed by the Examiner.

The Principles of English Grammar. (Bain recommended.)

History and Geography:

Grecian History, to the Death of Alexander the Great. (Smith recommended.)

Roman History, to the Accession of Augustus. (Liddell recommended.)

Outlines of Ancient and Modern Geography.

2. SCIENCE SCHOLARSHIP.

Arithmetic:

Measurement of Rectilinear Figures and of the Circle:

Algebra:

As far as the Solution of Simple and Quadratic Equations, with one or more unknown quantities. Ratio and Proportion. Arithmetical and Geometrical Progressions. The earlier properties of Logarithms. Easy questions in the application of Algebra to Geometry.

Geometry:

Euclid—First Four Books, or the equivalent course in Wilson's Elementary Geometry (3rd Edition), Euclid, Book VI., and the Definitions of Book V.

Trigonometry:

Methods of Measuring Angles. Definitions of the Trigonometrical Ratios. Values of Sine, Cosine, &c., of the Simpler Angles. The easier analytical formulae for one or more Angles. Solution of Plane Triangles. Problems.

Scholarships of the Second Year.

The French Language.

General Physics.

Chemistry.

Zoology and Botany.

Practical Anatomy—1. All the Bones and Joints of the Body; 2. The Thorax and Abdomen.

Scholarships of the Third Year.

Practical Chemistry.

Anatomy and Physiology (the whole of the lectures of the previous Session, except those on the Brain and Spinal Cord).

Practical Anatomy—(The same as for Scholarships of the Second Year, with the addition of the Extremities, and Head and Neck, but exclusive of the Brain and Spinal Cord).

Materia Medica.

Appendix A.

No. V.
Faculty of
Medicine.

Scholarships of the Fourth Year.

- I. One in Anatomy and Physiology (the whole of the lectures of the previous Session, but chiefly those on the Organs of Sense, the Brain, and Spinal Cord, and the Development of the Organs); Practical Anatomy (the whole of the body, but chiefly the Brain and Spinal Cord); and Surgery.
- II. One in Practice of Medicine; Midwifery; and Medical Jurisprudence.
- N.B.—At all examinations (both class and scholarship) on Anatomy and Physiology, Microscopic Specimens and Preparations from the Anatomical Museum are exhibited.

See Appendix No. I., p. 23, for the University Exhibitions and Prizes in the Faculty of Medicine.

Appendix B.

List of
Successful
Candidates
for Degrees
&c.

APPENDIX B.

No. VI.—UNIVERSITY DEGREES, DIPLOMAS, AND HONORS
OBTAINED BY STUDENTS OF QUEEN'S COLLEGE, CORK, AT
THE COMMENCEMENTS IN JUNE AND OCTOBER, 1877.

FACULTY OF ARTS.

DEGREE OF M.A.

Hamilton Benson, B.A.,	First Class in Biological Science.
Thomas Farrington, B.A.,	Second Class in Experimental Science.
John Philip Sullivan, B.A.,	Second Class in Experimental Science.
Daniel Crely, B.A.,	Upper Pass Division.

DEGREE OF B.A.

Clarke H. Irwin,	Upper Pass Division.
Morgan McSwiney	Upper Pass Division.

Passed.

James Foley.

FIRST UNIVERSITY EXAMINATION.

John P. Dalton,	First Honor Class.
Matthew Steen,	First Honor Class.
Robert J. Sullivan,	Second Honor Class.

Passed.

Henry Anderson.	Geo. A. Rountree.
James Foley (Supplem. Jan. 1877).	Edward Wall (Supplem. Jan. 1877).

FACULTY OF LAW.

DEGREE OF LL.D.

Henry Haslett Benthic (also of Belfast).

FACULTY OF MEDICINE.

DEGREE OF M.D.

Passed.

Daniel Francis Barry.	Charles Frederick Knight.
Archibald R. H. Bland.	John O'G. Sandiford.
Geo. Henry Bull.	Henry Geo. Thompson (also of Galway).
John Power Carmody.	William H. Thornhill, B.A.
Robert D. Donaldson.	James Tidbury.
Hugh L. Donovan.	John Edward Walsh.
Robert E. Donovan.	John Wilson, B.A. (also of Belfast).

DEGREE OF MASTER IN SURGERY (M.Ch.)

Daniel Francis Barry.	John Mulrennan.
Archibald R. H. Bland.	John O'G. Sandiford.
Geo. Henry Bull.	Henry Geo. Thompson (also of Galway).
John Power Carmody.	William H. Thornhill, B.A.
Robert D. Donaldson.	James Tidbury.
Hugh L. Donovan.	John Edward Walsh.

DIPLOMA IN MIDWIFERY.

Daniel Francis Barry.
Archibald R. H. Bland.
Geo. Henry Bull.
Hugh L. Donovan.
Robert E. Donovan.

Charles Fred. Knight.
Maurice J. O'Sullivan, M.D.
John O'G. Sandiford.
William H. Thornhill, M.A.
James Tidbury.

Appendix B.
List of
successful
Candidates
for Degrees,
&c.

SECOND UNIVERSITY EXAMINATION IN MEDICINE.

W. Ashley Cummins, ...	First Honor Class.
Geo. Redmond O'Donovan, ...	Second Honor Class.
Patrick Carroll Hickey, ...	Upper Pass Division.
Myles Wm. O'Reilly, ...	Upper Pass Division.
Joseph Michael Roche, ...	Upper Pass Division.

Passed.

Robert Ambrose, B.A.
Hamilton Benson, M.A.
William Henry Bourke.
John Chestnutt.
Thomas Dorman, B.A.
John Hosford.
William Kelly, B.A.
Richard John Legge.
John Leonard.

Edward Magnor.
Cornelius Moloney.
M. Wm. O'Keefe.
Michael C. O'Sullivan.
Arthur H. Pullin.
Robert Leonard Rutherford.
John Smyth.
Horace R. Townsend, B.A.
James Wigmore.

FIRST UNIVERSITY EXAMINATION IN MEDICINE.

Passed.

Charles William Allport.
Edward F. T. Barry.
Wm. Robert Cole.
Geo. Richard Crofts.
John Sullivan De Courcy.
Michael H. Feeney.
Patrick J. Gullway.
Hugh Greaney.
Arthur Robt. Harper.
Benjamin Wm. Hosford.
Daniel Kepple.
John R. Lane.
John Wood Lewis.
John Moran.
Patrick Joseph Nealon.
Francis B. Norris.
Thomas Nunan.

James Oakshott.
Michael O'Sullivan.
George Henry Powell.
Joseph M. Prendergast.
James J. Riordan.
James D. Rosa.
Arthur Joseph Ryan.
Albert C. M'C. Scully.
William Denis Sexton.
Henry Sinclair.
Jeremiah Sagrue.
Edward J. H. Sullivan.
John Philip Sullivan, M.A.
Robt. T. Thompson.
Thomas B. A. Tuohy.
James Whitton.

Postponed Subjects.

John J. Hartnett.

SCHOOL OF CIVIL ENGINEERING.

DEGREE OF BACHELOR OF ENGINEERING (B.E.)

Robert Scott Day, ... Upper Pass Division.

Passed.

Alex. E. Hall.
Philip T. Large (Dip. Eng.)

William H. K. Sandiford.
Robert Sterling (Dip. Eng.)

FIRST UNIVERSITY EXAMINATION IN ENGINEERING.

W. Fleming (Supplem. Jan. 1877).
Robt. T. N. Belcher, B.A. (Supplem.
Jan. 1877).

James D. Foley (Supplem. Jan. 1877).

Appendix B.

University Prizes at Entrance :

List of successful Candidates for Degrees, &c.	GEOMETRY, ...	Geo. Friend, ...	First.
	ENGLISH COMPOSITION, ...	John R. Davison, ...	Second.
		Michael Thos. Yarr, ...	First.
		Ch. E. F. Boyle, ...	Second.

No. VII.—SCHOLARS AND EXHIBITIONERS FOR THE SESSION 1877-78.

FACULTY OF ARTS.

Senior Scholars and Exhibitioners.

LANGUAGES, LITERATURES, AND HISTORY OF	Edwin S. Donovan, M.A.
ANCIENT GREECE AND ROME, ...	
MODERN LANGUAGES, LITERATURES, AND HIS-	Clark H. Irwin, B.A.
TORY, ...	
MENTAL AND SOCIAL SCIENCE, ...	Michael Keating, B.A.
NATURAL PHILOSOPHY, ...	John Philip Sullivan, M.A.
CHEMISTRY, ...	William Kelly, B.A.
	Exhibitioner—Thomas Farrington, M.A.
NATURAL HISTORY, ...	Hamilton Benson, M.A.
	Exhibitioner—Morgan M'Swincy, B.A.

Junior Scholarships and Exhibitioners.

Third Year.

IN LITERATURE.

David Gamble Lockhart.

IN SCIENCE.

John P. Dalton.
Matthew Stoen.
Robert J. Sullivan.
George A. Rountree.
E. Gibbins.

Second Year.

George W. Weir.
James B. Morrow.
William D. Russell.
John M. McNamara.
R. H. Fawcett.

Jeremiah Ambrose O'Connell.
Thomas Brown.
Michael J. McEnery.
John Morgan.
James H. Swanton, Jun.

First Year.

E. F. McGrath.
Louis S. Daly.
Reginald G. M. Webster.
Charles E. Boyle.

Francis McCarthy, } Equal.
John R. Davison, }
George Friend.
R. Gorsuch.
"R. G. M. Webster, } Equal.
M. Breen, }
R. Morrison, }

Exhibitioner—T. O'Riordan.

SCHOOL OF ENGINEERING.

Scholar of Third Year.

Robert T. N. Belcher, B.A.

Scholars of Second Year.

Hugh Tooker.

Scholars of First Year.

Richard E. Kelly.

FACULTY OF LAW.

Senior Scholar.

Denis F. Hannigan, B.A., LL.B.

Junior Scholars.

Second Year—Patrick J. McCarthy. | First Year—Joseph J. Healy, B.A.

Exhibitioner (First Year).

James A. Hart.

*Could not hold this Scholarship, having been appointed to one in the Literary Division.

FACULTY OF MEDICINE.

Fourth Year.

IN MEDICINE, MIDWIFERY, AND	} Joseph Crowley.
MEDICAL JURISPRUDENCE,	
IN PHYSIOLOGY, PRACTICAL ANATOMY,	} Charles Y. Pearson.
AND SURGERY,	

Third Year.

William Ashley Cummins.	Joseph M. Roche.
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Exhibitioners.

Thomas G. Atkins, B.A.	Jeremiah Cotter.
John E. Lane.	Myles W. O'Reilly.
John Hosford.	

Second Year.

Patrick J. Neeson.	James Whitten.
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First Year.

Daniel Lynch.	Michael Kelly.
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Exhibitioners in Practical Medicine, Surgery, and Midwifery.

PRACTICAL MEDICINE,	{ Thomas Gelston Atkins, B.A., Edward Magner, Charles Y. Pearson,	} equal.
" SURGERY,	{ Thomas Gelston Atkins, B.A., Charles Y. Pearson, Thomas Gelston Atkins, B.A.,	} equal.
" MIDWIFERY	{ John J. Hartnett, Charles Y. Pearson,	} equal.

NO. VIII.—SESSIONAL EXAMINATIONS.

PRIZES AND CERTIFICATES AWARDED FOR THE SESSION 1877-8.

FACULTY OF ARTS.

Third Year.

		Prize.	Certificate.	Prizes at the Sessional Examinations.
GREEK,	1. David Gamble Lockhart,			
LATIN,	1. David Gamble Lockhart,			
ENGLISH LITERATURE,	1. Robt. J. Sullivan,	Prize.		
	2. John P. Dalton,			
MODERN HISTORY,	1. David Gamble Lockhart,			
METAPHYSICS,	1. John P. Dalton,			
MATHEMATICS,	1. John P. Dalton,			
NATURAL HISTORY,	1. Henry Anderson,			
GEOLOGY AND MINERALOGY,	1. Henry Anderson,			
POLITICAL ECONOMY,	1. David Dexer,			
NATURAL PHILOSOPHY,	1. Robt. J. Sullivan,			
GEOLOGY,	3. Daniel O'Sullivan,			

Second Year.

GREEK,	1. { James B. Morrow, Reg. G. M. Webster,			
	3. { Ch. E. F. Boyle, Wm. D. Russell,	Certificate.		
	5. { Jn. R. Davison, Ed. H. Fawcett,			
LATIN,	1. Ch. E. F. Boyle,	Prize.		
	2.			
	3. { James B. Morrow, Reg. G. M. Webster,	Certificate.		
MODERN LANGUAGES,	1. Stanley Harrington,	Prize.		
	2. { Thomas Brown, Jeremiah Ambrose O'Connell,			
	4. Michael J. M'Enery,	Certificate.		
	5. James G. Copithorne,			
LOGIC,	1. Jeremiah Ambrose O'Connell,	Prize.		
	2. James B. Morrow,			
MATHEMATICS,	1. Jeremiah Ambrose O'Connell,			
	2. Michael J. M'Enery,			
NATURAL PHILOSOPHY,	1. Michael J. M'Enery,			

Appendix B.
Scholarship
Examina-
tions.

Appendix.

List of the Students who obtained Honours or Prizes at the Sessional Examinations.

		First Year.	
GREEK, ...	1. Geo. Friend,	Prize.	
	2. Michael Thos. Yarr,	"	
	3. {Francis M'Carthy, } {J. H. Swanton, Jun., }	Certificate.	
LATIN, ...	1. {Michael Thos. Yarr, } {Francis M'Carthy, }	Prizes.	
	2. Geo. Friend,	Certificate.	
	4. Daniel T. McEery,	"	
	5. Benjamin Hesford,	"	
	6. Robert Morrison,	"	
ENGLISH LANGUAGE, .	1. Michael Thomas Yarr,	Prize.	
	2. Francis M'Carthy,	"	
	3. John R. Davison,	"	
	4. .	Certificate	
	5. Ch. E. F. Boyle,	"	
MODERN LANGUAGES, .	1. .	Prize.	
(Second Division.)	3. Michael Thos. Yarr,	Certificate.	
MATHEMATICS, . . .	1. Geo. Friend,	Prize.	
	2. {M. A. Breen,	"	
	{Francis M'Carthy,	"	
	4. Dr. T. McEery, c	"	
SCHOOL OF ENGINEERING.			
NATURAL PHILOSOPHY, .	1. E. K. Dixon,	Prize.	
GEOLOGY, ...	1. Rd. Kelly,	"	
SURVEYING AND LEVELLING,	1. William E. Burchill,	"	
	2. Hugh Tooker,	"	
GEOMETRICAL DRAWING,	1. Frank Peard,	"	
FACULTY OF LAW.			
Second Year.			
CIVIL LAW, ...	William H. Corker,	Prize.	
ENGLISH LAW, . . .	Patrick J. M'Carthy,	"	
First Year.			
JURISPRUDENCE, . .	Michael Keating, B.A.,	"	
ENGLISH LAW, . . .	Joe J. Henly, B.A.,	"	
FACULTY OF MEDICINE.			
FRENCH, ...	1. .	Prize.	
(Second Division.)	2. Daniel Lynch,	"	
	3. .	"	
	4. Michael Kelly, M.A.,	Certificate.	
NATURAL PHILOSOPHY, .	1. Michael Kelly, M.A.,	Prize.	
	2. Havelock H. R. Charles,	"	
CHEMISTRY, ...	1. Michael Kelly, M.A.,	"	
	2. Havelock H. R. Charles,	"	
PRACTICAL CHEMISTRY, .	1. Albert Scully,	"	
	2. Jas. J. Riordan,	"	
	3. {Jas. Whitton,	"	
	{Geo. J. W. Johnston,	"	
Second Year.			
ANATOMY AND PHYSIOLOGY.	1. A. M. Davies,	"	
* Special Prizes.	2. Aug. H. Bampton,	"	
	1. Albert Scully,	"	
	2. Jas. Whitton,	"	
	3. Jas. J. Riordan,	"	
	4. Arthur J. Ryan,	Certificate.	
	5. Geo. J. W. Johnston,	"	

* These students, ranking as of the first year, and having taken part in the examination of the second year in Anatomy and Physiology, and obtained their first and second places respecting their special prizes, were awarded to them.

Third Year.

ANATOMY AND PHYSIOLOGY,	1. William Ashley Cummins,	Prize.	<i>Appendix B.</i> List of the Students who obtained Honours or Prizes at the Sessional Examinations.
	2. Jeremiah Cotter,	"	
	3. Joseph M. Roche,	"	
	Henry K. Allport,	Certificate of Honor.	

First Year.

PRACTICAL ANATOMY,	1. *Special Prize. A. M. Davies,	Prize.	
	1. Havelock H. R. Charles,	"	
	2. Michael Kelly, M.A.,	"	
	3. Daniel Lynch,	"	
	A. W. Sandford,	Certificate of Honor.	

Second Year.

1. { Albert Scully,	Prize.
{ James Whitton,	"
3. Wm. R. Lover,	"
4. Patrick Neslon,	Certificate.

Third Year.

1. William Ashley Cummins,	Prize.
2. Jeremiah Cotter,	"
3. Hamilton Benson, M.A.,	"
4. T. Gelston Atkins, M.A.,	Certificate.

Fourth Year.

	John F. Tuohy,	Certificate of Honor.
MATERIA MEDICA,	1. John Whitton,	Prize.
	2. { Jeremiah Sugrue,	"
	{ Henry Sinclair,	"
	4. Albert Scully,	Certificate.
	5. { William R. Cole,	"
	{ William Murray,	"
SURGERY,	1. T. Gelston Atkins, M.A.,	Prize.
	2. Myles W. O'Reilly,	"
MEDICINE,	1. Charles Y. Pearson,	Prize.
	2. John J. Hartnett,	"
	3. { Joseph Crowley,	Certificate.
	{ Edward Magner,	"
	5. William Kelly,	"
MIDWIFERY,	1. T. Gelston Atkins, M.A.,	Prize.
	2. John J. Hartnett,	"
	3. John Hosford,	Certificate.
	4. Hamilton Benson, M.A.,	"
MEDICAL JURISPRUDENCE,	1. Charles Y. Pearson,	Prize.
	2. Joseph Crowley,	"
	{ Edward Magner,	"
	{ John J. Hartnett,	"
PHYSIOLOGICAL ASSISTANT	{ Joseph M. Roche.	
	{ Daniel Haly.	
ASSISTANT DEMONSTRATORS OF ANATOMY,	W. Ashley Cummins.	
	Jeremiah Cotter.	
	Edward Magner.	
PROSECTORS OF ANATOMY,	John Tuohy.	
	John Dinne.	
	Albert Scully.	

No. IX.—EARLY ENGLISH TEXT SOCIETY'S PRIZES; AND NEW SHAKSPEARE SOCIETY'S PRIZES.

EARLY-ENGLISH TEXT SOCIETY'S PRIZES,	1. Michael Thomas Yarr.
	2. Francis M'Carthy.

* Mr. Davies ranking as of the First Year, and having taken part in the examination in Practical Anatomy of the Second Year, and obtained therein the first place this special prize was awarded to him.

Appendix B. NEW SHAKSPEARE SOCIETY'S PRIZES, { R. J. Sullivan, } equal
 Subjects { Wm. H. Corbier, }
 Lectured on, &c.

No. X.

TABLE CONTAINING THE NAMES OF THE SEVERAL SUBJECTS LECTURED UPON DURING THE SESSION 1877-78, THE NUMBER OF LECTURES GIVEN ON EACH SUBJECT, AND THE TOTAL NUMBER OF STUDENTS ATTENDING THE CLASSES IN EACH SUBJECT.

	No. of Lectures on each Subject.	Total No. of Students attending the Classes in each Subject.
Greek, ...	202	34
Latin, ...	192	29
English Language, ...	82	19
" Literature, ...	53	10
Modern History, ...	43	7
French, ...	225	98
Logic, ...	46	19
Metaphysics, ...	56	4
Political Economy, ...	40	2
Mathematics, ...	232	45
Natural Philosophy, ...	223	81
Chemistry, Theoretical, ...	69	66
" Practical, ...	94	38
Geology and Mineralogy, ...	62	12
Zoology and Botany, ...	72	53
English Law, ...	50	9
Jurisprudence, and Civil Law, ...	53	9
Anatomy and Physiology, ...	180	60
" Practical, ...	159	142
Medicine, ...	60	32
Surgery, ...	66	48
Midwifery, ...	48	43
Materia Medica, ...	65	34
Medical Jurisprudence, ...	36	27
Engineering, ...	242	17

Appendix C.

Reports
of the
Professors.

APPENDIX C.

No. XI.

REPORTS OF PROFESSORS FOR THE SESSION, 1877-1878.

FORM OF CIRCULAR SENT TO EACH PROFESSOR.

RETURN to be filled up by the Professor of _____, and to be returned to the Registrar, so filled up, for the official information of the President, on or before the _____, being for the Collegiate Session _____.

A.—As to the Course or Courses of Lectures given by the Professor.
 1st. Duration and extent of the Course; number of Terms. 2nd. Number of weeks of Lectures in each Term. 3rd. Number of Lectures weekly, and days and hours of Lectures.

B.—The description or title of the Course or Courses of Lectures delivered, and a general abstract of the subjects of instruction contained in the Course, and the title of the Text-books recommended.

C.—Whether the Lectures are illustrated by reference to maps, diagrams, specimens, or experiments; and a general notice of the kind of illustrations used.

D.—Whether any method of Tutorial, or other special instruction, is employed, as by setting out portions of Text-books for lessons, by themes, or exercises in composition, or problems; and whether Special Class Examinations are held, and at what time; or whether Herborization Excursions, or Field Exercises, are given. Appendix C.
Reports
of the
Professors.

E.—What faculties or division of Students are those attending Courses of Lectures of the Professors making the return.

F.—The number of students attending each Course—distinguishing Matriculated and Non-Matriculated Students; and the general regularity of attendance.

G.—The general conduct of Students at the Professor's Lectures; and the general state of discipline as regards the Professor's Classes.

H.—The general condition of the department of which the Professor has charge, as to supplies, fitments, cleanliness, and accommodation, for the purpose of instruction.

The Professor, in making the above returns, is requested to mark the answers with the letter designating the portion of the form of return, as above, to which each answer refers.

Signed, by order of the President,

ALEXANDER JACK, Registrar.

FACULTY OF ARTS.

REPORT of the PROFESSOR of GREEK.

A.—1. Three terms.

2. First term about six weeks; second term about nine; third term about three.

3. Junior class, four lectures weekly; senior class, do.; extra class, two lectures weekly. Each lecture of an hour's duration. The senior and extra class attended also, a non-compulsory lecture once a week during term time.

B.—Greek Language and Literature. The junior class read with the Professor the Hippolytus of Euripides, and part of the Fourth Book of Xenophon's Anabasis. Special instruction was given in Grammar and Composition. The Senior class read the *De Corona* of Demosthenes and the Ion of Euripides. They received also instruction in advanced grammar and in prose and verse composition. The Extra class read the Fourth Book of Thucydides.

C.—The lectures were illustrated occasionally by maps and diagrams on the black-board.

D.—The method of teaching was chiefly tutorial, portions of text-books and exercises in composition being given to the students for preparation.

E.—Faculty of Arts.

F.—Junior students, 23; senior do., 10; extra, 1; all matriculated. Attendance regular.

G.—Excellent.

H.—Very good, except that, as stated by the Professor in the last report, the arrangement of the benches in the lecture-room is not well adapted for large classes.

VAUGHAN BOULGER, M.A.

Appendix C

Reports
of the
Professors.

REPORT OF THE PROFESSOR OF LATIN.

A.—1. The course extended through three terms. 2. First term, seven weeks; second term, thirteen weeks; third term, three weeks. 3. Senior class, three lectures weekly; junior class, four lectures weekly; extra and third year's class, two lectures weekly.

B.—The Latin Language, text-books of lectures. Senior class: Cicero, Tusculan Disputations, Book III., from chap. 18 to the end; Terence, part of the *Heauton-Timoramenos*. Junior class: Horace, *Epistles*, Book II.; Cicero, Tusculan Disputations, part of Book I. Extra and third year's class, portions of the *Captive* of Plautus, and Cicero's Oration pro Sestio.

C.—The lectures were illustrated by references to the art-collections belonging to the College.

D.—The students prepared a portion of the text-book for each lecture; they also wrote Latin exercises in prose and verse.

E.—Students in Arts.

F.—Twenty-eight matriculated and one non-matriculated. The general attendance was regular.

G.—Unexceptionable.

H.—Satisfactory.

B. LEWIS.

REPORT OF THE PROFESSOR OF HISTORY AND ENGLISH LITERATURE.

A. (a).—HISTORY. (1st.) Two. (2nd.) *First term*, seven and a half; *second term*, nine and a half. (3rd.) Three: Tuesdays, Thursdays, and Fridays: 2 o'clock.

(b).—ENGLISH LITERATURE. (1st.) Two. (2nd.) *First term*, eight; *second term*, ten and a half. (3rd.) Three: Tuesdays, Thursdays, and Fridays: 12 o'clock.

(c).—THE ENGLISH LANGUAGE. (1st.) One. (2nd.) eleven. (3rd.) Three: Tuesdays, Thursdays, and Fridays: 11 o'clock.

B. (a).—HISTORY. History of England from 1603 to 1815. Text-books optional.

(b).—ENGLISH LITERATURE. History of Literature of England from the death of Chaucer to the present day, with special studies of Shakspeare (*Macbeth*); Milton (*Paradise Lost*, Books I. and II.); Pope (*Essay on Man*); Byron (*Childs Harold*, Cantos III. and IV.); Text-books, the Clarendon Press series, where available.

(c).—THE ENGLISH LANGUAGE. Outlines of its History, with special studies of the Anglo-Saxon Grammar and the English of Chaucer. Text-books—Rask (*Anglo-Saxon Grammar*); Morris (*English Accidence*); Chaucer (Prologue *Clarendon Press*).

C.—No.

D. (a).—HISTORY and Special Class Examination held early in second term.

(b).—ENGLISH LITERATURE. Exercises in Literary Criticism.

(c).—THE ENGLISH LANGUAGE. Exercises in Essay Writing; Lessons in Outlines of A.-S. Grammar; Paraphrases of Early English, &c.

E.—Arts and Engineering.

F. (a).—HISTORY. 7 matriculated; (b), *English Literature*, 9 matriculated, 1 non-matriculated; (c), *English Language*, 19 matriculated. Attendance good.

G.—Very good throughout.

H.—No report to make.

G. F. ARMSTRONG.

REPORT of the PROFESSOR of MODERN LANGUAGES.

Appendix C.

A.—1. There were three courses of lectures on the French language and literature during the session: the first (1st division) for students of the second year; the second, senior French (2nd division); and the third (3rd division) junior French.

Reports
of the
Professors.

2. There were three lectures a week in each division during three terms, from 12 to 3.

3. The first term comprised nine weeks; the second, thirteen weeks; and the third, four weeks.

B.—The lectures were on the French language and literature, and comparative grammar, with reading, exercises, compositions, and translations; the text-books being Demogéot's *Littérature Française* and *Textes Classiques*.

C.—This department requires no illustrations, &c., &c.

D.—The instruction given is chiefly tutorial; one lecture a week being given on the syntax, literature, and comparative grammar—the other days being taken up with reading and translations.

E.—The students of the three divisions belonged to the Faculties of Arts and Medicine, and to the Engineering Department.

F.—The number of students was as follows: 1st division, 12; 2nd division, 35; 3rd division, 39.

G.—The general conduct of the students has been very satisfactory.

H.—The general condition of the rooms and attendance excellent.

R. DE VERICOUR.

REPORT of the PROFESSOR of LOGIC and METAPHYSICS.

A.—1. Metaphysics, two terms; Logic, one term. 2. Nine weeks first term; twelve weeks second term. 3. Three in each course, Tuesdays, Thursdays, and Saturdays, from eleven a.m. to noon, and from one p.m. to two p.m.

B.—Logic, and Metaphysics—Fowler and Jevons, parts of Thomson, Mill, and Bain. History of Philosophy and Psychology; Sir W. Hamilton's Lectures.

C.—No illustrations are used except such as are drawn or written on the board during the course of the lectures.

D.—Both the professorial and tutorial systems are used.

E.—Metaphysics, third year's students in Arts; Logic, second year's students in Arts, and non-matriculated.

F.—Logic, sixteen, and one non-matriculated student; Metaphysics, four; attendance excellent.

G.—Discipline and conduct of students unexceptionable.

H.—No change since last year.

G. S. READ.

REPORT of the PROFESSOR of MATHEMATICS.

A.—1. The lectures lasted for three terms, and the students attending them belonged to the first, second, and third years. During the greater part of the session the first year's class was divided into two parts.

2. The number of weeks of lectures in first term were nine; in the second, eleven; and in the third, three.

3. There were given three lectures a week to each class. The junior division of the first year's class met on Mondays, Wednesdays, and Fridays at twelve o'clock; the second

Appendix C.
Reports
of the
Professors.

year's class on the same days at one o'clock; and the third year's class on the same days at two o'clock. The senior division of the first year's class met on Tuesdays, Thursdays, and Fridays, but the hours of meeting varied at different periods of the session to suit the convenience of those attending it.

B.—The subjects treated of in the first year's classes were—Arithmetic, Algebra, Geometry, and Trigonometry; in the second year's class—Trigonometry, (Analytical and Spherical), Theory of Equations, Elementary Solid Figures, Analytical Geometry of two dimensions, Differential and Integral Calculus. The subjects treated of in the third year's class comprised—Solid Geometry, Differential Equations, Calculus of Variations, &c.

With the exception of Wilson's Elementary Geometry and Euclid, no particular text-books were absolutely required. The following were recommended to be used in connexion with the lectures:—Todhunter's "Elementary and Advanced Algebra," Todhunter's "Trigonometry, Elementary and Advanced," Todhunter's "Spherical Trigonometry," Todhunter's "Conic Sections," Todhunter's "Integral Calculus," Todhunter's "Examples in Geometry of three Dimensions," Todhunter's "Theory of Equations," Williamson's "Differential Calculus," Williamson's "Integral Calculus," Salmon's "Conic Sections," Salmon's "Higher Algebra," Salmon's "Geometry of three Dimensions," or Aldis' "Geometry of three Dimensions," or Frost and Wolstenholmes' "Geometry of three Dimensions," Boole's "Differential Equations," Gross' "Algebra."

C.—The illustrations used were principally figures on the board; there were also exhibited some models illustrating the generation of certain surfaces.

D.—Instruction was given partly by lectures, partly by examinations on the lectures, and on passages set from the text-books. Oral examinations were frequently held, and also occasionally written examinations at different times during the session. Problems were set regularly in each of the classes.

E.—The matriculated students attending the lectures were either students in Arts or Engineering.

F.—Of the first year's students 28 were matriculated, 2 non-matriculated; of the second year's students, 11 were matriculated, 1 non-matriculated; of the third year's students, 4 were matriculated.

The attendance was this year unusually regular.

G.—The general conduct of the students was excellent, and discipline satisfactory.

H.—State of department was satisfactory.

C. NIVEN.

REPORT OF THE PROFESSOR OF NATURAL PHILOSOPHY.

A.—Four courses of lectures, each three terms; weeks in the first, in the second, in the third. In the classes of Mathematical Physics three lectures were delivered in each week; in the other classes two lectures weekly.

B.—In Mathematical Physics the subjects were—Mechanics, Hydrostatics, Optics, Astronomy. In Engineering Physics—Practical Mechanics, Principles of Mechanism, Thermodynamics. In Experimental Physics—Hydrostatics, Heat, Light, Magnetism, and Electricity.

Text-books.—In Mathematical Physics—Newth's "Mechanics," Todhunter's "Statics," Tait and Steel's "Dynamics," Parkinson's "Optics," Godfray's "Astronomy." In Experimental Physics—Everett's translation of Deschanel's Physics, Ganot's "Traité de Physique." Appendix C.
Reports
of the
Professors.

C.—The lectures were illustrated by experiments.

D.—In Mathematical and Engineering Physics the tutorial method was chiefly adopted.

E.—The course of Experimental Physics was attended by students of the first year in Medicine and students of the second year in Engineering. The senior class of Mathematical Physics by students of the third year in Arts and students of the third year in Engineering; the junior class of Mathematical Physics by students of the second year in Arts. Engineering Physics by students of the third year in Engineering.

F.—Experimental Physics, . Senior Mathematical Physics, 7. Junior Mathematical Physics, 17. Engineering Physics, 3. The attendance was regular.

G.—The general conduct of the students was most satisfactory.

H.—The formation of a Physical Laboratory has proved a very great advantage to the department.

JOHN ENGLAND.

REPORT of the PROFESSOR of CHEMISTRY.

A.—Two courses, one on Theoretical and the other on Practical Chemistry. The former extended over three, and the latter over two terms. Theoretical Course, three lectures weekly, at 11 o'clock. Practical course, six lectures weekly, five at 2 and one at 11 o'clock (Saturday).

B.—The Theoretical course embraced both Inorganic and Organic Chemistry. In the Practical course, Qualitative Analysis was taught. Text-books recommended—Fownes, Roscoe and Naquet, Schorlemmer's History of Carbon Compounds, Armstrong's Organic Chemistry. Galloway's Qualitative Analysis.

C.—The lectures were illustrated by diagrams, experiments, and specimens.

D.—Both the tutorial and professorial methods were employed.

E.—The lectures were attended by Arts, Engineering, and Medical students.

F.—The Theoretical Course was attended by 60 matriculated and 6 non-matriculated students, and the Practical Course by 34 matriculated and 1 non-matriculated students. Attendance very good.

G.—The conduct of the students was most satisfactory.

H.—The arrangements for carrying on the business of the department are excellent.

MAXWELL SIMPSON.

REPORT of the PROFESSOR of NATURAL HISTORY.

A.—The Professor's lectures were included in two courses; one course being on Geology and Mineralogy, the other on Natural History. 1st. the former extended over two terms; the latter over three. 2nd. The first term included 9 weeks, the second, 14, and the third term of lectures 3 weeks. 3rd. The number of lectures given weekly was three in each course, the days and hours of the course in Geology and Mineralogy being Tuesdays and Thursdays from two to three, and on Saturdays from twelve to one; the number of lectures in this course being 62. The

Appendix C lectures on the course of Natural History were given on Mondays, Wednesdays, and Fridays, the number of lectures being 72, and the hours from three to four.

Reports of the Professors.

B.—The course of Geology and Mineralogy included Physical Geography, Geology, Palaeontology, and Mineralogy; the text-books recommended being Herschell's Physical Geography, Somerville's Physical Geography, Lyell's Student's Elements of Geology, Lyell's Principles of Geology, Jukes' Manual of Geology, Nicholson's Palaeontology, Rutley's Mineralogy, and Nicol's Elements of Mineralogy.

The course of Natural History included the principles of Zoology and Botany, with special reference to the structure and classification of animals and plants. In Zoology the text-books recommended were Nicholson's Zoology, Huxley's Manuals of the Anatomy of Invertebrate and Vertebrate Animals. In Botany, Oliver's, Humphrey's, and Hooker's Manuals were recommended.

C.—Maps, diagrams, sections, models and specimens were used in illustrating the course on Geology and Mineralogy, diagrams and specimens being used in that of Natural History.

D.—The Professorial mode of teaching was used. In the second term excursions were made for practical instruction in Geology and Palaeontology; and in connexion with Botany there were some herborizations during the third term.

E.—The Geological and Mineralogical course was attended by third year's Arts and first year's Engineering students. The Natural History course by Medical students of the first year, and third year's Arts students.

F.—The number of students attending the Geological and Mineralogical course was 12, being 9 Engineering and 3 Arts, all matriculated. In the Natural History course the number was 52, 6 being non-matriculated, of which 4 were Arts and 48 Medical students.

G.—The conduct of the students in the lecture-rooms was satisfactory.

H.—Regarding supplies, fittings, cleanliness, and accommodation, these meet the requirements of the Professor. In the Natural History lecture-room, however, the Professor finds a want of light in the afternoons in winter when the lectures are being given.

ROBERT HARENESS.

SCHOOL OF ENGINEERING.

REPORT of the PROFESSOR of CIVIL ENGINEERING.

A.—1. Each course extends through three terms. 2. First term, 9 weeks; second term, 14 weeks; third term, 3 weeks. 3. Three lectures per week in each course. Students of first year, Monday, Wednesday, Friday, 10, A.M.; second year, Tuesday, Thursday, Saturday, 10, A.M.; third year, Monday, Wednesday, Friday, 12, noon. Office open, Tuesday, Thursday, Saturday, 10, A.M., to 2, P.M.

B.—*First year.*—Descriptive Geometry; Orthographic Projection; Shadows; Isometric Projection; Perspective; Elements of Ornamental Architecture. Text-books: Hall's "Descriptive Geometry"; "Engineer and Machinist's Drawing Book"; Rickman's "Architecture." *Second year.*—Surveying, Levelling, and Mensuration. Text-books: Rankine's "Civil Engineering"; Cotton's "Manual of Railway Engineering." Oblique Bridges; Text-book: Burke's Treatise. Hydraulics; Text-books: Downing's "Hydraulics"; Neville's "Hydraulic Formulae." *Third year.*—Materials used in Construction; Strength of Materials; Stresses

in Structures; Principles of Construction of Bridges, Roads, Railways; Supply of Towns with Water. Text-books: Rankine's "Civil Engineering," Stoney's "Theory of Strains," Fairbairn's "Iron Manufacture," Shelley's "Workshop Companion," Barry's "Railway Appliances"; references to many books in the Library. *Drawing Office*.—First year students are engaged in drawing the problems given at lectures, and easy examples of their application, and in shading simple bodies; those of the second and third year in making working drawings of examples of the subjects of lectures, and in mapping.

C.—Illustrated by reference to maps, drawings, and instruments.

D.—Both the tutorial and professorial methods of instruction are employed, according to circumstances. Instruction in the field is given (see class-roll).

E.—Students in the department of Civil Engineering.

F.—Students of first year, Matriculated	8
" second year, "	5
" third year, "	4
	17

The attendance has been very good.

G.—Conduct of students very good.

H.—The condition of the department has undergone little change during the last few years.

ALEXANDER JACK.

FACULTY OF LAW.

REPORT OF THE PROFESSOR OF JURISPRUDENCE AND POLITICAL ECONOMY.

A.—Political Economy, 32 lectures, 2 terms. Jurisprudence, 24 lectures, 2 terms. Civil Law, 24 lectures, 2 terms.

In *Political Economy*.—The lectures began 23rd November, and continued to 21st December; were resumed 20th February, continued to 16th March. Four lectures weekly, on Mondays, Wednesdays, and Fridays at 11 o'clock, and on Saturdays at 12 o'clock.

In *Jurisprudence*.—Lectures began 11th December, continued to 21st December; were resumed 19th February, continued to 3rd of April. There should have been four lectures weekly—on Monday, Tuesday, Wednesday and Thursday, at 8, P.M.; but there was an unavoidable interruption in the number weekly during the second period.

In *Civil Law*.—Lectures began 11th December, continued to 20th December; resumed 19th February, continued to the 2nd of April. There should have been four lectures weekly, on Monday, Tuesday, Wednesday, and Thursday, at 7, P.M.; but there was an unavoidable interruption in the number weekly during the second period.

B.—In *Political Economy*, Mills' "Political Economy" was the chief text-book; in *Jurisprudence*, Maine's "Ancient Law," in *Civil Law*, Landar's "Justinian."

C.—No illustrations or experiments.

D.—The instruction was largely tutorial with constant examination.

E.—In *Political Economy*, third year's Arts; in *Jurisprudence*, first year's Law; in *Civil Law*, second year's Law.

F.—In *Political Economy*, 2 matriculated students; in *Jurisprudence*, 4 matriculated students, two non-matriculated. In *Civil Law*, three students, all matriculated.

G.—The conduct of the students was very good.

H.—Satisfactory.

R. H. MILLS.

Appendix C.

REPORT OF THE PROFESSOR OF ENGLISH LAW.

Reports
of the
Professors.

A.—The courses of lectures consisted of the usual number—Twenty-four to each class, the number (4) limited in each week not being exceeded. Portion was given in the first term, that, however, being less than half, for the same cause as was mentioned in last year's Report and referred to in the President's Report ("7 Lectures"), namely by the obligation on solicitors' apprentices of attending in Dublin the lectures of the Incorporated Society's Professor, no recognition being given by that body to the Law Courses of the Queen's Colleges. The courses begun in December, were continued in the months of February, March, and April, until completed.

B.—The instruction commenced with an explanation of the alterations made by the Judicature Act and other legislation of the Session, 1876-77, in the law and practice in Ireland; the usual courses of study were then proceeded with:—With the first year's class, the history and principles of the Law of Real Property; to the second year's class, instruction in the principles of the Law of Personal Property, and in relation to contracts, and the procedure relating thereto; also as to principles and practice in relation to Equity and Bankruptcy. The text-books are the works of Mr. Joshua Williams, Mr. J. W. Smith, and Mr. Snell.

C.—Cases are referred to and explanations given.

D.—The progress in comprehension of the instruction afforded is tested by questions occasionally; and matter for reading recommended as suitable before and after lectures.

E.—Law.

F.—Nine students attended.

G.—The conduct of the students was unexceptionable.

H.—The accommodation is sufficient.

MARK S. O'SHAUGHNESSY.

FACULTY OF MEDICINE.

REPORT OF THE PROFESSOR OF ANATOMY AND PHYSIOLOGY.

A.—Three courses, five and sometimes six days weekly, during the first, second, and part of the third term. Anatomy and Physiology at one o'clock; Practical Anatomy at twelve o'clock. Anatomy and Physiology, 130 lectures and examinations; Practical Anatomy, 150 demonstrations.

B. I.—*Anatomy and Physiology*.—(1.) Histo-Chemistry; (2), Histology; (3), the Anatomy and Physiology of the organs of digestion, respiration, circulation, excretion, and reproduction; (4), the Anatomy and Physiology of the lymphoid organs, also the brain, spinal cord, organs of special sense and voice; (5), Embryology, including a description of the development of the principal organs. As the subjects embraced in this course cover a very extensive field, a few of them are treated of only in alternate sessions. Text-books—Quain's "Anatomy" and Kirke's "Physiology." Senior students are recommended to read in addition Foster's "Physiology." For consultation, Carpenter's "Human Physiology," Hermann's "Physiology," Frey's "Histology."

II.—*Histology and Practical Physiology*.—Instruction in this department is given in the *Physiological Laboratory*, which is provided with microscopes and the apparatus necessary for performing experiments on circulation, respiration, innervation, &c. Text-books—Foster's "Practical Physiology," and Schäfer's "Practical Histology;" for senior

students, "Handbook for Physiological Laboratory," by Dr. Burdon Saunderson, Klein, &c.

III.—*Practical Anatomy*.—The Anatomical Demonstrations are given on five days in the week by the Senior Demonstrator, and occasionally by the Professor of Anatomy. The course includes—(1), the Descriptive Anatomy of the bones and ligaments; (2), the Topographical Anatomy of the thorax, the abdomen, and the limbs, head, and neck. *Senior division of the class*.—The Professor of Anatomy has a special meeting of the senior division of the class every Wednesday, at 11 o'clock, A.M., when the more abstruse subjects of the course are discussed. *Junior division of the class*.—The Junior Demonstrator meets the junior students every Wednesday at 10 o'clock, A.M., for special instruction in Osteology. The dissecting-room is open from 9 o'clock, A.M., till 4 o'clock, P.M., daily; and the dissections of the students are superintended by the Professor, Demonstrators, and Prosectors of Anatomy. *Text-books*—Ellis's "Demonstrations" and Quain's "Anatomy." For students preparing for any of the Colleges of Surgeons—Heath's "Manual of Dissections." For consultation—Holden or Wagstaffe's "Osteology," Gray's "Anatomy," Holden's "Medical and Surgical Landmarks," Cruveilhier's "Anatomy."

Appendix B.
Reports
of the
Professors.

C.—The lectures and demonstrations are illustrated by diagrams, plates, models, moist and dry specimens from the Anatomical Museum, microscopic preparations, recent dissections and experiments.

D.—In Anatomy and Physiology oral examinations are frequently held, usually on Saturdays; there are also written examinations immediately after Christmas, as well as at the close of the session. In Practical Anatomy short oral examinations are held almost daily.

E.—Faculty of Medicine.

F.—In Anatomy and Physiology—matriculated, 58; non-matriculated, 2, (=60) students.

In Practical Anatomy—matriculated, 135; non-matriculated, 7(=142) students.

Attendance on both classes good.

G.—Excellent.

H.—This department has been much improved during the last two years, notably in the recent addition to the Dissecting-Room. The Anatomical Theatre, however is unsuited for the purpose; the roof is too low, there is no place in which to exhibit microscopes, and the space for diagrams is insufficient. There is also still a deficiency in diagrams and physiological apparatus. This year again I recommend the advisability of establishing a summer session in connexion with the Medical School.

J. J. CHARLES.

REPORT of the PROFESSOR of MATERIA MEDICA.

A.—Six months. Sixty-five lectures. Three lectures weekly, Tuesdays and Thursdays, 3 o'clock, P.M.; Saturdays 12 o'clock, noon.

B.—Pharmacology, Pharmacodynamics, Therapeutics. The action of medicines on healthy animals. Their action in disease. *Materia Medica*, including a classification of Medicines. A systematic description of drugs, their physical and chemical characters. Posology. Formulation.

The British Pharmacopœia is the only text-book formally used. The College possesses an excellent medical library to works in which the students are from time to time referred.

C.—The lectures are illustrated by chemical experiments, specimens

E 2

Appendix A. of the drugs named in the British Pharmacopœia, and of other drugs of recognised therapeutic value. Dry specimens of medical plants. Recent specimens, when obtainable. Verification of the purity of drugs by the Pharmacopœial, and other tests. The application of the microscope for similar purposes. Occasional experiments on animals.

D.—Class examinations on the subject-matter of the lectures are held weekly.

E.—Faculty of Medicine.

F.—Matriculated, 32; Non-matriculated, 2; Total, 34.

G.—Most satisfactory.

MATTHIAS O'KEEFE.

REPORTS of the LECTURERS on MEDICAL JURISPRUDENCE.

Medical portion.

A.—Twenty-four lectures. Three weekly, on Monday, Wednesday, and Friday, at 3 o'clock, P.M.

B.—Medical Jurisprudence. Thanatology: Examination of dead body; Forms of violent death; Signs of do.,—Wounds, Stains, Hair, &c. Disputed sexual relations. Disputed mental aberration. Toxicology.

C.—Specimens of the various poisons. Recent specimens of the most important indigenous poisonous plants; Experiments on animals. Chemical analysis of poisoned articles of food, and of the viscera and their contents of poisoned animals.

D.—Not considered necessary in this subject.

E.—Faculty of Medicine.

F.—Twenty-seven students.

G.—Most satisfactory.

H.—Satisfactory.

MATTHIAS O'KEEFE.

Legal portion.

A.—Twelve lectures, occupying three weeks of the first Term, were delivered.

B.—In relation to Forensic Medicine and Medical Police, the description of knowledge most likely to be practically useful in legal inquiries, whether civil or criminal, was pointed out.

C.—The subject was treated of in the order of matter followed in Traill's Outlines; references were made to the works of Taylor, Goodman, and Tidy, Casper, Beck, Paris and Fomblanque, &c.; and explanations given out of legal treatises, such as those of Russell, Stephen, Woolrych, &c. The subjects requiring attention in connexion with the Sanitary Code in Ireland were pointed out, and the law and practice in relation to Lunacy were explained.

D.—References for extended study were given.

E.—Medicine.

F.—Twenty-seven students attended.

G.—Their general conduct was satisfactory.

H.—I have no requirement to make. Some students complained to me of late editions of works relating to the subject being lent out of the Library, and of the advantages of reference and study, by the general body of students being thus affected inconveniently.

MARK S. O'SHAUGHNESSY.

REPORT of the PROFESSOR of SURGERY.

Appendix C

Reports
of the
Professors.

A.—Theory and Practice of Surgery, three terms, first commencing 16th October, ending 22nd December; second commencing 7th January, ending 13th April; the third commencing 29th April, and ending May 1st. Three lectures weekly—on Tuesday and Thursday, four to five o'clock; and on Saturday from one to two o'clock.

B.—The Theory and Practice of Surgery, and Operative Surgery, Erichsen's Surgery, Holme's Surgery, Bryant's Practice of Surgery.

C.—Pathological preparations, Diagrams operations on the subject.

D.—Occasional Examinations.

E.—Faculty of Medicine.

F.—Number of students forty-six, all of whom were Matriculated. Attendance regular.

G.—Conduct very good.

H.—Department is deficient in supplies and fitments; a good supply of Surgical Instruments is much needed, it being impossible to give instruction in that essential branch of Surgery without them; but accommodation in other respects is good.

W. K. TANNER.

REPORT of the PROFESSOR of the PRACTICE of PHYSIC.

A.—Lectures on the Practice of Physic delivered on three terms during six months. Number of weeks in each term unsettled. Three lectures weekly—Monday, Wednesday, at one o'clock; Saturday, twelve o'clock.

B.—Lectures on Practice of Physic, embracing all subjects of internal Pathology.

C.—Lectures illustrated by engravings and pathological specimens.

D.—The members of the class are frequently examined on the subjects of previous lectures.

E.—Students belong to the Medical Faculty solely.

F.—Thirty Matriculated; two Non-matriculated.

G.—The conduct and discipline of the students was admirable.

H.—Changes and improvements are being made, which will leave nothing to be desired on this head.

DENIS C. O'CONNOR, M.D.

REPORT of the PROFESSOR of MIDWIFERY.

A.—Course of lectures on Midwifery.

1. Six months duration.

2. Lectures continuously given.

3. Three lectures weekly, Monday, Wednesday, Friday, and 4 o'clock.

B.—Midwifery. Physiology of reproduction and gestation. Parturition in its various bearings, theoretical and practical. Diseases of child-bed. Management of infants.

C.—Maps, diagrams, specimens and models.

D.—

E.—Medical Faculty.

F.—Number of students, 44. Matriculated, 44; Non-matriculated, 0.

G.—General conduct of a considerable number of students excellent; that of others by no means as good as usual.

H.—Supply of preparations, &c., for the illustration of the lectures far from complete.

J. (R.) HARVEY.

Appendix C. NO. XII.—REPORT OF LIBRARIAN FOR SESSION 1877-78.

Report of the Librarian. The number of volumes in the Library at the date of this Report is 23,568. They may be classified as follows:—

Mathematics, {Pure, ...	863	Celtic Language, &c., ...	92
{Mixed, ...	800	History, Antiquities, &c., ...	3,562
Chemistry, ...	1,084	Biography, ...	810
Botany and Zoology, ...	1,835	Geography and Voyages, ...	853
Medical Sciences, ...	2,970	Engineering, ...	596
Theology, &c., ...	341	Agriculture, ...	245
Logic and Metaphysics, ...	403	Fine Arts, ...	238
Jurisprudence, ...	660	Bibliography, ...	145
Education, ...	249	Encyclopædians, ...	642
Law, ...	973		
Ancient Classical Literature, ...	2,097	Total, ...	23,744
Sanskrit, Arabic, &c., ...	121		
Geology, ...	783	Increase over last year, exclusive	
English Language, &c., ...	1,639	of 176 vols. of the Transactions	
European Language, &c., ...	1,857	and Journals, ...	802

Of these 802 volumes, 423 were presented, the remainder purchased by the Council of the College.

The Library has suffered no loss in any description of property since date of last report.

Discipline is, as usual, excellent. There was no complaint of any kind during the session.

The alteration in the windows, by the substitution of sheet glass for the small diamond panes, has considerably increased the light, but the drafts still continue, and are much complained of by the students. The insertion of double doors at the entrance of the Library, is considered by many, to be the only effectual means to prevent this.

One hundred and fifty-five volumes have been bound during the year.

The second munificent present of books to the Library by William H. Crawford, of Lakelands, county Cork, esq., has now placed within our reach the *Monumenta Historica* of the great European Nationalities, &c., and which we could only hope, ever, to obtain by such an act of private generosity.

I have again to call attention to the utter inadequacy of the shelf accommodation to the constantly increasing number of books.

I am again requested by many gentlemen engaged in historical inquiries to express their gratitude for the privilege accorded them of access to the Library, and I am glad to be able to add that the general public feel equally grateful for the attention they always receive whenever they may have occasion to refer to our books.

The series of historical documents, Calendar of State Papers, and published under the direction of the Master of the Rolls, are, as heretofore, sought after by literary inquirers.

The General Catalogue is now so far completed, that the slips may be at any time transferred to the rough draft. The principle adopted is the Alphabetical one, found so successful in the Library of the British Museum and elsewhere.

RICHARD CAULFIELD, LL.D., Librarian.

NO. XIII.—BURSAR'S ANNUAL ACCOUNT OF THE RECEIPTS *Appendix C* AND EXPENDITURE OF QUEEN'S COLLEGE, CORK.

General Abstract of the Receipts and Expenditure of the College, from 1st April, 1877, to 31st March, 1878.

DR.		£	s.	d.
To Balance on 1st April, 1877—General Account,	£1,079 11 4			
Library Deposits,	87 0 0	1,066	11	4
" Amounts received from Paymaster-General—				
Endowment (less Income Tax),		6,955	2	2
Special Parliamentary Grant in aid of Professors' Salaries,		295	8	1
Additional Grant for maintenance of College,		1,000	0	0
College Fees and Fines,		81	3	6
Professors' Class Fees,		1,628	0	0
Library Deposits,		33	0	0
Dividend on £1,000 15s. 7d., Three Per Cent. Stock,		32	8	5
Received as a Donation for Special Purposes,		10	0	0
Sale of £1,000 15s. 7d., Three Per Cent. Stock,		1,022	17	4
Total,		£12,920	8	1
CR.		£	s.	d.
By Amount paid for Salaries—				
President, Professors, and Officers,		4,855	5	5
Scholarships, Prizes, and Exhibitions,		1,398	15	0
Minor Officers, Porters, and Servants,		565	16	0
Payments on account of Special Grant,		275	1	8
Payments on account of Additional Grant, Fees and Fines,		1,628	0	11½
Payments on account of Class Fees,		1,628	0	0
Library Deposits repaid,		34	0	0
Travelling Expenses,		4	0	0
Mobility of Purchase Money for Additional Land,		1,311	10	0
Balance on General Account,	£221 16 0½			
Special Account,	0 0 0	995	16	6½
Library Deposits,	68 0 0			
Total,		£12,920	8	1

ACCOUNT OF THE EXPENDITURE OF THE PARLIAMENTARY GRANT OF £1,600 FOR THE MAINTENANCE OF THE COLLEGE, AND OF THE COLLEGE FEES AND FINES FOR THE YEAR ENDING 31st MARCH, 1878.

DR.		£	s.	d.
To Amount received from Paymaster-General,		1,000	0	0
College Fees and Fines,		81	3	6
Balance,		0	17	5
Total,		£1,082	0	11
CR.		£	s.	d.
By Amount expended on Library—				
Ancient and Modern Languages,	150 11 7	452	6	7
Mathematical and Physical Sciences,	81 5 2			
Natural Sciences,	42 18 1			
Medical Sciences,	76 12 8			
Engineering,	33 5 9			
Mental and Legal Sciences,	29 10 6			
General Library,	11 3 8	46	17	2
Binding,	46 17 2			
By Amount expended for Apparatus, Diagrams, Materials, for Laboratory, &c.—				
Chemical Laboratory,	£146 18 7	490	17	1
Physical Cabinet,	144 15 8			
Engineering,	18 8 6			
Medical Faculty Apparatus,	153 14 4			
By Amount expended on Museums,		65	12	6
By Amount expended on Printing,				
Stationery,	38 15 1	169	16	4
Advertising,	40 13 3			
By Amount expended in Heating,	£197 19 1½	271	2	6½
Lighting,	73 5 11			
By Amount expended on Botanic Garden and Grounds—				
Wages,	£165 10 0	175	4	10½
Maintenance of Grounds,	27 14 20½			
Miscellaneous Expenditure—				
Porter's Clothing,	227 8 0	147	10	6
Water Supply,	11 11 0			
Incidentals,	47 16 6			
Postage,	6 0 2			
Miscellaneous,	25 8 10			
Total,		£1,082	0	11

(Signed), JOHN ENGLAND, M.A., BURSAR.

The account of the College for the year ending the 31st of March, 1878, of which the above is a summary, has been signed and passed by the Auditor-General.

Appendix D.

APPENDIX D.

No. XIV.

Faculty of Arts.

SCHOLARSHIP EXAMINATIONS.

LITERARY SCHOLARSHIPS—FIRST YEAR.

GREEK.

Επιμείνων, Professor BOULGER.

Translate :—

I. οἱ δὲ δύο σκόπελοι, ὁ μὲν οὐρανὸν εὐρὺν ἰκάνει
 ὀξεῖη κορυφῇ, νεφέλη δὲ μιν¹ ἀμφιβέβηκεν
 κυανέη· τὸ μὲν οὐ ποτ' ἔρωσι, οὐδὲ ποτ' αἶθρη
 κείνου ἔχει κορυφήν, οὐτ' ἐν θέρει οὐτ' ἐν ὀπώρῃ·
 οὐδέ κεν¹ ἀμβλαῖη βροτὸς ἀνὴρ, οὐ καταβαίη,
 οὐδ' εἰ οἱ χεῖρες τε ἰσίκουσι καὶ πόδες εἰεν·
 πέτρῃ γὰρ λῖς ἐστι, περιζιστῇ εἰκυῖα.
 μέσσω δ' ἐν σκοπέλῳ ἐστὶ σπέος ἡεροειδές,
 πρὸς ζόφον εἰς Ἑριβος τετραμμένος, ἥπερ ἂν ἡμεῖς
 νῆα παρὰ γλαφυρὴν ἰθύνετο, φαίδιμ' Ὀδυσσεῦ.
 οὐδέ κεν ἐκ νηὸς γλαφυρῆς αἰζήσιος ἀνὴρ
 τόλῃ οἰστεύσας κοῖλον σπέος εἰσαφίκοιτο.
 ἔνθα δ' ἐνὶ Σκύλλῃ ναίει δεινὸν λελακυῖα·
 τῆς ἦτοι φωνὴ μὲν ὅση σκύλακος νεογίλης,
 γίνονται, αὐτῇ δ' αὖτε πέλωρ κακόν· οὐδέ κ' εἰ τις μιν
 γηθήσειεν ἰδὼν, οὐδ' εἰ θεὸς ἀντιήσειεν.
 τῆς ἦτοι πόδες εἰσὶ δυνάδεα πάντες ἄωροι,
 ἔξ δέ τί οἱ δειραὶ περιμήκειες, ἐν δὲ ἐκάστῃ
 σμερδαλίη κεφαλὴ, ἐν ᾗ τρίστοιχοι ὀδόντες,
 πικνοὶ καὶ θαμέες, πλεῖοι μελανοὶ θανάτοιο.¹
 μέσση μὲν τε κατὰ σπέους κοῖλῳ δίδυκεν,
 ἔξω δ' ἐξίσχει κεφαλῆς δεινοῖο βερέθρου,
 αὐτοῦ δ' ἰχθυῖα, σκόπελον περιμαιμώσασα,¹
 δελφίνας τε κύνας τε καὶ εἰ ποθι μᾶλλον ἔλθουσιν¹
 κῆτος, ἃ μυρία βόσκει ἀγέστονος Ἀμφιτρίτῃ.
 τῇ δ' οὐ πάποτε ναῦται ἀκήριοι εὐχετόωνται
 παρφυγείν¹ σὺν νηὶ· φέροι δέ τε κρατὶ ἐκάστῃ
 φῶτ' ἔξαρχάσασα νῆος κυανοπέρροιο.

Τὸν δ' ἕτερον σκόπελον χθαμαλώτερον ὄψει, Ὀδυσσεῦ,
 πλησίον ἀλλήλων· καὶ κεν διοίστευσσας.
 τῷ δ' ἐν ἱρινεὸς ἐστὶ μέγας, φύλλοισι τεθηλώς·
 τῷ δ' ὑπὸ δια Χάρυβδις ἀναρροιβδεῖ μέλαν ἔδωρ.
 τρίς μὲν γάρ τ' ἀνίσχιν ἐκ' ἡματι, τρίς δ' ἀναροιβδεῖ
 δεινόν· μὴ σῶγε κεῖθι τύχους, ὅτε βοιβδήσειεν·
 οὐ γὰρ κεν βύσσαιό σ' ὑπέκ κακοῦ οὐδ' ἐνοσίχθων

ἀλλὰ μάλα Σκύλλης σκοπέλῳ πεπλημένος, ὧκα
 νῆα παρέξ ἔλααν,¹ ἔπειτ' πολὺ φέρετόν ἐστιν
 ἔξ ἐτάρους ἐν νηὶ ποθήμεναι,¹ ἢ ἅμα πάντας.

Appendix D.
 Scholarship
 Examinations.

HOMER.

- II. λαοὶ δ' ἐπερρώθησαν, Ἀγαμέμνων τ' ἀναξ
 εἶπεν μετεῖναι² παρθένον νεανίαις.
 οἱ δ' ὥς τάχιστ' ἤκουσαν ἱστάτην ὕπα,
 μεθῆκαν, οὐπὲρ καὶ μέγιστον ἦν κρᾶτος.
 κάπει τόδ' εἰσήκουσε δεσποτῶν ἦτος,
 λαβοῦσα πέπλους ἐξ ἑκρας ἑωμίδος
 ἔρρηξε λαγόνος εἰς μίσην παρ' ὀμφαλόν,
 μαστοὺς τ' εἶδειε στήρνα θ' ὥς ἀγάλματος
 ἀλλίστα, καὶ καθέϊσα πρὸς γαίαν γόνυ
 ἔλαξε πάντων τλημονέστατον λόγον·
 ἰδοῦ, τόδ' εἰ μὲν στέρνον, ὃ νεανία,
 παῖειν προθυμεῖ, παῖσον,³ εἰ δ' ὅτ' αἰχίνα
 χρήζεις, πάρεστι λαιμὸς εὐτρεπῆς ὄψε.
 ὁ δ' οὐ θέλων τε καὶ θίλων οἴκτῳ κύρης,
 τέμνει σιδήρῳ πνέματος διαρροάς·
 κρουνοὶ δ' ἐχώρουν. ἡ δὲ καὶ θνήσκουσα ὅμως
 πολλὴν πρόνοιαν εἶχεν εὐσχήμως πιστεῖν,
 κρύπτουσα ἃ κρύπτειν ἤμαρ ἀρσένων χρεών.³
 ἐπεὶ δ' ἀφῆκε πνεῦμα θανασίμῳ σφαγῇ.
 οὐδέεις τὸν αὐτὸν εἶχεν Ἀργείων πόνον·
 ἀλλ' οἱ μὲν αὐτῶν τὴν θανοῦσαν ἐκ χερῶν
 φύλλοις ἔβαλλον, οἱ δ' ἐπληροῦνταν πυρὰν
 κορμούς φέροντες πευκίνοιν, ὁ δ' οὐ φέρων
 πρὸς τοῦ φέροντος τοιάδ' ἤκουεν κακά·
 ἔστηκας, ὃ κάκιστε, τῇ νεάνιδι
 οὐ πέπλον οὐδὲ κόσμον ἐν χερσὶν ἔχων·
 οὐκ εἴ τι θώσων τῇ περίσσο³ εὐκυρτεῖ
 ψυχὴν τ' ἀρίστη; τοιάδ' ἀμφὶ σῆς λίγω
 παιδὸς θανούσης, εὐτεκνωτάτην δὲ σὶ
 πασῶν γυναικῶν³ δυστυχεστάτην θ' ὀρῶ.

EURIPIDES.

III. ἐνταῦθα εἶχον πόνονα τὰ ἐπιγῆδεια ὅσα ἐστὶν ἀγαθὰ, ἱερεῖα, εἶπον, οἶκους
 παλαιούς ἐσώδεις, ἀσταφίδας, ὕσπρια παντοδαπά. τῶν δὲ ἀποσκεδαννυμένων
 τινὲς ἀπὸ τοῦ στρατοπέδου ἔλεγον ὅτι κατίζουσιν² στράτευμα καὶ νίκτωρ πολλὰ
 πικρὰ φαίνοντο. ἰδοὺ δὴ τοῖς στρατηγοῖς οὐκ ἀσφαλὲς εἶναι διασηνέων,
 ἀλλὰ συναγαγεῖν² τὸ στράτευμα τάλιν. ἐντεῦθεν συνῆλθον· καὶ γὰρ ἰδοὺ
 διασθιβάσειν. κυκυρεύνοντων δ' αὐτῶν ἐνταῦθα ἐπιπίπτει χιὼν ἀπλετος,
 ὥστε ἀπέκρυψε καὶ τὰ ὅπλα καὶ τοὺς ἀνθρώπους κατακακίμενους· καὶ τὰ
 ὑποζύγια συνεπτόδισεν ἡ χιὼν· καὶ πολλὸς ἕκνος ἦν ἀνίστασθαι· κατακακίμενων
 γὰρ ἄλειπτον ἦν ἡ χιὼν ἐπιπεπτακυῖα ὄψ³ μὴ παραρρηγίῃ. ἐπεὶ δὲ Ξενοφῶν
 ἐτόλμησε γυμνὸς ἀναστὰς σχίζειν ξύλα, τάχα ἀναστάς τις καὶ ἄλλος ἐκείνου
 ἀφελόμενος ἔσχιζεν. ἐκ δὲ τούτου καὶ οἱ ἄλλοι ἀναστάντες πῦρ ἔκαιον καὶ

Appendix D. ἔχρυντο· πολὺ γὰρ ἐνταῦθα εὗρίσκετο χρῖσμα ᾧ ἔχρυντο ἀντ' ἐλαίου σέτων
Scholarship καὶ σσημάμινον καὶ ἀμυγδαλίον· ἐκ τῶν πικρῶν καὶ τεραβίνθινον. ἐκ δὲ τῶν
Examina- αὐτῶν τούτων καὶ μέρον εὗρίσκετο.
tions.

XENOPHON.

1. Give the Attic equivalents for the Epic forms marked 1 in passage I.
2. Parse accurately all words marked 2.
3. Scan the first and last lines of the passage from Euripides. What are the restrictions on the use of the spondee, dactyl, and anapest in the tragic senarius?
4. Illustrate the force of the preposition *παρά* according as it is used with the genitive, dative, and accusative cases.
5. *ᾤσσε* ἀπέκρυψε καὶ τὰ ὄπλα. Distinguish the use of *ᾤσσε* with the indicative from the use of *ᾤσσε* with the infinitive mood.

Translate the following into Attic Prose :—

1. You asked a difficult question, and one altogether puzzling to a man like me.
2. And the wild asses, whenever anyone pursued them, after running forward, would stand still; for they ran much quicker than the horses.
3. Here Kuros had a large park, full of wild beasts, which he used to chase on horseback, whenever he wanted to exercise himself and his horses.
4. He feared that he might not be able to get out of the King's territory, but might on every side be hemmed in by various difficulties.
5. He was unconsciously corrupting his associates.

LATIN.

Examiner, Professor LEWIS.

1. State the rules for the caesura in hexameters, and quote examples.
2. Draw the character of Cato Uticensis.
3. What are the genitive cases of the following words:—*Tus, iter, jecur, supellex, porticus, magnes, and grando*?
4. Describe accurately the situation of *Samarobriua, Nemausus, Avaricum, Ariminum, and Clusium*.
5. Mention some words and phrases that are followed by *quis*.

Re-translate into Latin :—

It is kind in you, and like a brother, to press me to this friendship, though I am running that way apace myself, and shall do, what often happens to travellers, who rising later than they intended, yet by quickening their speed, come sooner to their journey's end, than if they had set out earlier; so I, who have overslept myself in my observance of this man, though you were frequently rousing me, will correct my past laziness by mending my pace for the future.

THE ENGLISH LANGUAGE.

Examiner, Professor ARMSTRONG.

Appendix D.
Scholarship
Examina-
tions.

1. Distinguish between the *Trouvères* and the *Troubadours*.
2. When, under what circumstances, and to what extent, did the dialect of the Troubadours affect the English language?
3. Give some account, after Dr. Craik, of the *Anglo-Saxon Chronicle*.
4. Show that the simplification of the inflectional system of the English Language is not to any great extent due to foreign influence.
5. Give some account of Wace, Layamon, and Ormin.
6. Name the sources from which the following words are drawn, and state at what periods respectively they appear to have been introduced into our language:—*Chalice*, *disciple*, *cedar*, *elm*, *crystal*, *church*, *heretic*, *spade*, *epistle*.
7. Give examples of Greek prefixes in the English language.
8. Give a list of the suffixes by means of which English adjectives are formed from nouns.
9. Give examples of English nouns the plurals of which differ in meaning from the singulars; and of nouns used only in the plural.

COMPOSITION.

Write an essay on *Envy*.

ANCIENT HISTORY—ANCIENT AND MODERN GEOGRAPHY.

Examiner, Professor ARMSTRONG.

HISTORY OF GREECE AND ROME.

1. Name the various parts of Europe and Asia peopled or colonized by the Hellenic race.
2. Relate the story of Codrus.
3. Describe the Ecclesia, and its powers.
4. Describe the change effected by Cleisthenes in the judicial power of the Athenians.
5. Give a brief account of Simonides, Alceus, and Anacreon.
6. Give a brief account of the origin and progress of the Third Messenian War.
7. Mention the principal events of the First Mithridatic War.
8. Write a concise narrative of the conspiracy of Catiline.
9. Give an account of the First Triumvirate.

ANCIENT AND MODERN GEOGRAPHY.

1. Give the ancient names of the principal Islands in the Mediterranean.
2. Describe the British Indian Empire, naming its boundaries, principal mountain-ranges, rivers, provinces, and cities.
3. Give the ancient and modern names of the principal rivers of Italy, Spain, and France.

LITERARY SCHOLARSHIPS—SECOND AND THIRD YEARS.

GREEK.

Examiner, Professor BOULGER.

Translate:—

I. τὸ δὲ δὴ μετὰ τοῦτο ἐπιθυμῶ ὑμῖν χρησμοῦσθαι, ὃ καταψηφισμένοι μου καὶ γὰρ εἰμι ἥδη ἐνταῦθα, ἐν ᾧ μάλιστα ἄνθρωποι χρησμοῦσιν, ὅταν μέλλωσιν ἀποθανεῖσθαι. φημὶ γάρ, ὦ ἄνδρες, αἱ ἐμὰ ἀπεκτόνατε,¹ τιμωρίαν ὑμῖν ἔξιν εὐθὺς μετὰ τὸν ἐμὸν θάνατον πολὺ χαλεπωτέραν, νῆ Δί', ἥ ὅσιν ἐμὰ ἀπεκτόνατε² νῦν γὰρ τοῦτο εἰργάσασθε οἰόμενοι μὲν ἀπαλλάξεσθαι τοῦ ἐκδόναι ἔλεγχον τοῦ βίου, τὸ δὲ ὑμῖν πολὺ ἐναντίον ἀποβήσεται, ὥς ἐγὼ φημι. πλείονες³ ἔσονται ὑμᾶς οἱ ἐλέγχοντες, οἷς νῦν ἐγὼ κατεῖχον, ὑμεῖς δὲ οὐκ ἡσθάνεσθε καὶ χαλεωτέροι ἔσονται ἔσθ' νεώτεροί εἰσι, καὶ ὑμεῖς μᾶλλον ἀγανακτήσετε. εἰ γὰρ οἴεσθε ἀποκτείνοντες ἀνθρώπους ἐπισχῆσαι τοῦ ἀνεδίδειν τινα ὑμῖν ὅτι οὐκ ἀρθῶς ζήτε, οὐκ ἀρθῶς διανοεῖσθε· οὐ γὰρ ἐστ' αὕτη ἡ ἀπαλλαγὴ οὔτε πάντῃ δυνατὴ οὔτε καλὴ, ἀλλ' ἐκείνη καὶ καλλίστη καὶ βέλτιστη, μὴ τοὺς ἄλλους κολούειν, ἀλλ' ἐαυτὸν παρασκευάζειν ὅπως ἔσται ὡς βέλτιστος. ταῦτα μὲν οὖν ὑμῖν τοῖς καταψηφισαμένοις μαντευσάμενος ἀπαλλάττωμαι.

PLATO.

II. καὶ ἅμα, εἰπὲρ τινες καὶ ἄλλοι, ἄξιοι νομίζομεν εἶναι τοῖς πέλας ψόγον ἐπενεγκεῖν,¹ ἄλλως τε καὶ μεγάλων τῶν διαφερόντων καθιστώτων,² περὶ ὧν οὐκ αἰσθάνεσθαι ἡμῖν γε δοκεῖτε οὐδ' ἐκλογίσασθαι πώποτε πρὸς οἷους ὑμῖν Ἀθηναίους ὄντας καὶ ὅσον ὑμῶν καὶ ὡς πᾶν διαφέροντας ὁ ἀγὼν ἔσται. αἱ μὲν γε νεωτεροὶ καὶ αἱ ἐπιτοῖσαι ἄξεῖς καὶ ἐπιτελέσαι ἔργῳ δ' ἂν γνῶσιν ὑμεῖς δὲ τὰ ὑπάρχοντά τε σώζειν καὶ ἐπιγνώνας μηδὲν καὶ ἔργῳ οὐδὲ γάρῃ κατὰ ἐξείσθαι. αὐθις δὲ αἱ μὲν καὶ παρὰ δύνανται τολμηταὶ καὶ παρὰ γνώμην κινδυνεύουσι καὶ ἐπὶ τοῖς δεινοῖς ἐδελπίδες· τὸ δὲ ὑμέτερον τῆς τε δυνάμεως ἐνδεᾶ πράξει τῆς τε γνώμης μηδὲ τοῖς βιβαίοις πιστεῦσαι τῶν τε δεινῶν μηδέποτε οἴεσθαι ἀπολυθήσεσθαι. καὶ μὴν καὶ ἄσκητοι πρὸς ὑμᾶς μελλητὰς καὶ ἀποδημηταὶ πρὸς ἐνδημοτάτους· οἴονται γὰρ οἱ μὲν τῇ ἀπουσίᾳ ἂν τι κτᾶσθαι, ὑμεῖς δὲ τῷ ἐπελθεῖν καὶ τὰ ἐτοῖμα ἂν βλάψαι. κραυγόντες τε τῶν ἐχθρῶν ἐπὶ πλείστον ἐξέρχονται καὶ νικώμενοι ἐπ' ἐλάχιστον ἀναστίνουσιν. ἔτι δὲ τοῖς μὲν σώμασιν ἁλλοτριωτάτοις ἐπὲρ τῆς πόλεως χρῶνται, τῇ γνώμῃ δὲ οἰκειοτάτῃ ἕς τὸ πρᾶσσειν τι ἐπὲρ αὐτῆς. καὶ ἡ μὲν ἂν ἐπινοήσαντες μὴ ἐπεξέλθωσιν οἰκεία στέρεισθαι ἡγούνται,² ἢ δ' ἂν ἐπελθόντες κτήσωνται ὀλίγα πρὸς τὰ μέλλοντα τυχεῖν πράξαντες.³ ἦν δ' ἄρα τού' καὶ πέρεθ' σφαλῶσιν, ἀντελπίσαντες ἅλλ' ἀτελήρωσαι⁴ τὴν χρεῖαν· μόναι γὰρ ἔχουσι τε ὁμοίως καὶ ἐλπίζουσιν ἃ ἂν ἐπινοήσωσι διὰ τὸ ταχέϊαν τὴν ἐπιχείρησιν ποιῆσθαι ὧν ἂν γνῶσι. καὶ ταῦτα μετὰ πάντων πάντα καὶ κινδύνων δι' ὅλον τῷ αἰῶνος μοχλοῦσι, καὶ ἀπολαύουσιν ἐλάχιστα τῶν ὑπαρχόντων διὰ τὸ ἀεὶ κτᾶσθαι καὶ μήτε ἐορτὴν ἄλλο τι ἡγέσθαι ἢ τὸ τὰ δέοντα πράξει, ἐνυμφόσθαι τε οὐχ ἥσσαν· ἡσυχίαν ἀπράγμονα ἢ ἀσχολίαν ἐπίκονον· ὥστε εἰ τις αὐτοὺς ἐνέλκων⁵ φαίη περφεύειν ἐπὶ τῷ μήτε αὐτοὺς ἔχειν ἡσυχίαν⁶ μήτε τοὺς ἄλλους ἀνθρώπους εἶναι, ἀρθῶς ἂν εἴποι.

THUCYDIDES.

III. ὥς μὲν τὰδ' οὐχ ᾧδ' ἔστ' ἀριστ' ἐργασμένα,
μή μ' ἐκιδάσκει, μηδὲ συμβόλῃεν' ἔτι.
ἐγὼ γὰρ οὐκ οἶδ' ὅμμασιν τοίοις βλέπων
πατέρα ποτ' ἦν προσεΐδον εἰς "Αἰδου μολῶν,
οὐδ' αὖ τάλαιναν μητρί', οἷν ἱμοὶ ἐνοῖν
ἔργ' ἐστὶ κρείσσον' ἀγχόνῃς ἐργασμένα.
ἀλλ' ἡ τέκνων δῆτ' ὄψις ἦν ἐφίμερος,
βλαστοῦσ' ὅπως ἔβλαστε, προσλευσσειν ἱμοί.
οὐ δῆτα τοῖς γ' ἱμοῖσιν ὀφθαλμοῖς ποτέ
οὐδ' ἄστυ γ', οὐδὲ πύργος, οὐδὲ δαιμόνων
ἀγάλασθ' ἱρά, τῶν ὁ παντλήμων ἐγὼ
κάλλιστ' ἀνὴρ εἷς ἐν γε ταῖς Θήβαις τραφαίε'
ἀπεστέρησ' ἑμαυτὸν, αἰτὸς ἐννέπων
ὠθεῖν ἅπαντας τὸν ἄσιβῆ, τὸν ἐκ θεῶν
φανέντ' ἀναγνον καὶ γένους τοῦ Δαΐου.
τοῖανδ' ἐγὼ κηλῖδα μηνύσας ἐμὴν
ὀρθοῖς ἱμελλον ὅμμασιν τούτους ὄρῃν ;
ἤκιστά γ'· ἀλλ' εἰ τῆς ἀκουούσης ἔτ' ἦν
πηγῆς εἰ ὥτων' ὄραγμαός, οὐκ ἦν ἐσχόμην'
τὸ μάσκελῆσαι τοῦμόν δόβλιον ἄεμας,
ἔν' ἢ τυφλός· τε καὶ κλέων μηδέν· τὸ γὰρ
τῇν φροντίδ' ἔξω τῶν κακῶν οἰκτεῖν γλυκύ

SOPHOCLES.

1. Parse accurately all words marked (1) in the above.
2. Write notes on the syntax of passages marked (2).

Translate the following into Attic prose : -

Not many years after the expulsion of the tyrants from Hellas the Athenians and Persians fought the battle of Marathon. Ten years later the Persians, with their celebrated armada, again invaded Hellas to enslave it. Then, great danger being imminent, the Lacedaemonians, as the most powerful nation, assumed the leadership of the confederates, and the Athenians having determined, on the approach of the Persians, to abandon their city, removed their property, took to their ships, and became a maritime people. By their united efforts the Hellenes drove back the invader, but this unity not long after ceased, for both those who had originally joined the confederacy against the Great King, and those who subsequently revolted from him, split up into two parties, and sided either with the Athenians or the Lacedaemonians, these two states being manifestly the most powerful, one by sea, the other by land. For a short time the alliance between Athens and Sparta continued, but finally the two nations quarrelled, and with the support of their respective allies made war against each other. Moreover, such of the other Hellenic states as were at variance with each other, at once set about joining one side or the other, so that from the Persian war down to the present war, the Hellenes were excellently trained in military matters, being, with the exception of an occasional truce, constantly engaged in conflicts either with each other or their rebellious dependencies, and, as their drill was accompanied with the dangers of actual warfare, reached an extraordinary degree of military skill.

Appendix D.

Scholarship
Examina-
tions.

LATIN.

Examiner, Professor LEWIS.

Translate :—

CICERO—*Tusculan Disputations*, I., 24.

M. Quid? illa tandem num leviora censes, quae declarant inesse in animis hominum divina quaedam? quae si cernerem quem ad modum nasci possent, etiam quem ad modum interirent viderem. Nam sanguinem, bilem, pituitam, ossa, nervos, venas, omnem denique membrorum et totius corporis figuram video posse dicere unde concreta et quo modo facta sint: animum ipsam, si nihil esset in eo nisi id, ut per eum viveremus, tam natura putarem hominis vitam sustentari quam vitis, quam arboris: haec enim etiam dicimus vivere. Item si nihil haberet animus hominis, nisi ut appeteret aut fugeret, id quoque esset ei commune cum bestiis. Habet primum memoriam et eam infinitam rerum innumerabilium: quam quidem Plato recordationem esse vult superioris vitae. Nam in illo libro, qui inscribitur *Ménos*, passionem quemdam Socrates interrogat quaedam geometrica de dimensione quadrati. Ad ea sic ille respondet, ut puer, et tamen ita faciles interrogationes sunt, ut gradatim respondens eodem perveniat quo si geometrica didicisset.

Translate into Latin hexameters :—

Nature attend! join every living soul,
Beneath the spacious temple of the sky,
In adoration join; and, ardent, raise
One general song! To him ye vocal gales,
Breathe soft, whose spirit in your freshness breathes:
Oh! talk of him in solitary glooms!
Where, o'er the rock, the scarcely waving pine
Fills the brown shade with a religious awe.

Translate into Latin prose :—

Trajan was ambitious of fame; and as long as mankind shall continue to bestow more liberal applause on their destroyers than on their benefactors, the thirst of military glory will ever be the vice of the most exalted characters. The praises of Alexander, transmitted by a succession of poets and historians, had kindled a dangerous emulation in the mind of Trajan. Like him, the Roman emperor undertook an expedition against the nations of the East; but he lamented with a sigh that his advanced age scarcely left him any hopes of equalling the renown of the son of Philip. Yet the success of Trajan, however transient, was rapid and specious. The degenerate Parthians, broken by intestine discord, fled before his arms.

THE ENGLISH LANGUAGE, &c.

Examiner, Professor ARMSTRONG.

1. State Grimm's Law, and illustrate it by examples.
2. Give examples of Latin words introduced into the English language, (a) through Kymric, (b) through Norman-French, (c) direct from Latin sources.

3. Give an account of the *Ænglisc* dialects that flourished before the Norman Conquest, and their distinctions.
4. Write out the various tenses of *faran*.
5. Give a list of the various *contractions* which we find in Chaucer.
6. Explain the following words and phrases:—*Ferne kalves*; *sovereign pryse*; *chivachie*; *peynede hire*; *fetys*; *gauded al with grene*; *ther as*; *gulled hen*; *pricasour*; *purfiled atte honde*; *stenede as a forneys of a leede*; *galdynges*; *taxpesters*; *his witte bisette*.
7. Write a brief narrative of the events of English history during the reign of Harold.
8. Describe the circumstances which led to the establishment of English power in Ireland.
9. Describe the events which led to the loss of Normandy.
10. Recount the achievements of the Black Prince.

Appendix D.
Scholarship
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tions.

COMPOSITION.

Write an essay on *The Uses of the Study of the Early History of Nations*.

MODERN LANGUAGES.

Examiner, Professor DE VERICOUR.

N.B.—This paper was common to the Candidates for Second and Third Year Library Scholarships, in Arts, and for those of the Second Year in Medicine and Engineering.

Translate into French:—

In the reign of Charles II. the coffee-houses of London were the chief organs through which the public opinion of the metropolis vented itself. Every man of the upper or middle class went daily to his coffee-house to learn the news and to discuss it. Every coffee-house had one or more orators to whose eloquence the crowd listened with admiration, and who soon became, what the journalists of our time have been called, a fourth estate of the realm. Nobody was excluded from those places who laid down his penny at the bar. Yet every rank and profession, and every shade of religious and political opinion, had its own head-quarters. There were houses near St. James's Park where fops congregated, their heads and shoulders covered with black or flaxen wigs, not less ample than those which are now worn by the Chancellor and by the Speaker of the House of Commons. The atmosphere was like that of a perfumer's shop. Tobacco, in any other form than that of richly scented snuff, was held in abomination. If any clown, ignorant of the usages of the house, called for a pipe, the sneers of the whole assembly and the short answers of the waiters soon convinced him that he had better go somewhere else. Nor indeed would he have had far to go, for, in general, the coffee-houses reeked with tobacco like a guard-room; and strangers sometimes expressed their surprise that so many people should leave their own fire-sides to sit in the midst of eternal fog and stench.—MACAULAY.

1. How is the adverb *just* followed by a participle rendered in French?
2. When is the negative *ne* applied in French without there being a corresponding negative in English? Give examples.
3. Explain fully what is understood by classical and romantic literature?
4. Which was the most brilliant epoch of French literature?

Appendix D.

Scholarship
Examinations.

SCIENCE SCHOLARSHIPS—FIRST YEAR.

MATHEMATICS.

Examiner, Professor NIVEN.

N.B.—This Paper and the following one were common to Candidates for a Scholarship of the First Year in Arts, Engineering, and Medicine. The University Prizes in Geometry were awarded for answering in the First Paper.

FIRST PAPER.

1. Define parallel lines, and state the axiom upon which their theory rests.

If a straight line fall upon two parallel straight lines, it makes the alternate angles equal to each other.

2. Describe a parallelogram upon a given straight line which shall be equal to a given triangle, and shall have an angle equal to a given angle.

Through a point in the angle formed by two straight lines draw a straight line, such that the part intercepted by the lines shall be bisected at the point; prove also that from a point inside a triangle three lines can be drawn, meeting the sides of the triangle and bisected at the point, provided the point lie within the triangle formed by joining the middle points of the sides.

3. The square on the hypotenuse of a right angled triangle is equal to the sum of the squares on the sides containing the right angle.

If equilateral triangles be described on the sides of any triangle, prove that the lines drawn from the angles of the triangle to the further angles of the equilateral triangles described on the opposite sides, meet in a point, and are equal to one another.

4. If P be any point in a line, AB , whose middle point is M , prove that the sum of the squares on PA , PB , is double the sum of the squares on PM , MB . Find the locus of a point, the sum of the squares of the perpendiculars, from which on the four sides of a rectangle is constant.

5. Prove that the angle at the centre of a circle is double the angle at the circumference. Mention any deductions which may be made from this theorem.

If a series of triangles stand on the same base, and have equal vertical angles, prove that the centre of the circles inscribed in these moves on a circle.

6. Describe a triangle having given :

(1) The base, the vertical angle, and the sum of the squares of the sides.

(2) The base, and the radii of the inscribed and circumscribed circles.

7. If two circles touch the line through their centres passes through the point of contact.

8. Define a regular polygon, and show that a circle may be described, which shall pass through each of its angles.

9. Similar triangles are in the duplicate ratio of their homologous sides.

10. Find a mean proportional to two given straight lines.

If through a point O on a circle there be drawn a diameter and a line XY perpendicular to this diameter, and lying outside the circle, and if a line OPQ meet the circle in P and XY in Q , prove that a circle which touches the given circle in P and passes through Q will touch XY .

Second Paper.

Appendix

Scholarship
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tions.

1. If a pound of standard gold, 22 carats fine, be worth £46 1*s.* 6*d.*, find the value of a gold rupee of Madras which weighs 7 dwt. 12 grs., and is of fineness 916 per 1,000.

2. A certain sum invested in the 3 per cent. stock yields the possessor £291 15*s.* He sells out at 95½, and invests in 4 per cents at 98½; find the change in his income.

3. Prove that—

$$(\overline{x-1}^2 + \overline{x+1}^2 + \overline{4x^2})^2 = 2 \cdot \{\overline{x-1}^4 + \overline{x+1}^4 + 16x^4\},$$

and extract the square root of—

$$9x^2 + 3x - \frac{1}{x} + \frac{1}{x^2} - \frac{23}{4}$$

4. Reduce to their simplest forms the expressions—

$$\frac{2(x^4 - y^4) + 5xy(a^2 - y^2)}{x^2 - y^2 + y(x - y)}, \quad \frac{(a^2 + b^2)^2}{b^2(a^2 - b^2)} \cdot \frac{a+b}{a-b} \cdot \frac{a-b}{a+b} - 2$$

5. Solve the following equations:—

$$(1) \frac{x-1}{x-2} + \frac{x-2}{x-1} = 3\frac{1}{2}.$$

$$(2) 5x + \frac{7x-2}{4x-1} = 13 + \frac{10x^2-2x-8}{2x+1};$$

$$(3) x(x-1)(x-2)(x-3) = \frac{1}{2}.$$

6. If 12 oxen eat up 3½ acres of grass in 4 weeks, and 21 oxen eat up 10 acres of like pasture in 9 weeks, the grass growing uniformly, how many oxen will eat up 24 acres in 18 weeks?

7. Define *proportion*, giving a clear explanation of the meaning of the word as used in Arithmetic and Algebra.

If $a : b :: c : d$, prove that $a : b :: a-c : b-d$.

Prove also that if $b(2c+a)$ be a mean proportional between a^2+2b^2 and b^2+2c^2 , then $a : b :: b : c$.

8. Sum the following series:—

$$\frac{1}{4} + 1\frac{1}{2} + 2\frac{3}{4} + \dots \text{ to } n \text{ terms.}$$

$$1\frac{1}{2} + \frac{1}{4} + \frac{1}{2^2} + \dots \text{ to } 6 \text{ terms and to } \infty.$$

9. If the n^{th} term of an arithmetic series be $\frac{2n-1}{3}$ for all values of n , find the series and prove that the sum of n terms $= \frac{n^2}{3}$.

10. Determine the value of $\cos A$ in terms of $\tan A$.

Write down the tangents of 45° , 60° , 145° , 36° .

11. Prove the following formulae:—

$$\tan \frac{A}{2} = \frac{\sin A}{1 + \cos A}$$

$$\frac{1 - \sin A}{1 + \sin A} = \tan^2 \left(\frac{\pi}{4} - \frac{A}{2} \right);$$

and prove that if $\tan A = \frac{1}{3}$, $\tan B = \frac{1}{4}$, then $A+B=90^\circ$.

12. State and prove the formulae for solving a triangle in which are given two sides and the included angle.

If b, c, A be given, prove that—

$$a = (b-c) \sec \theta \text{ where } \tan \theta = \frac{2 \sin \frac{A}{2} \sqrt{bc}}{b-c}$$

SCIENCE SCHOLARSHIPS—SECOND AND THIRD YEARS.

MATHEMATICS.

Examiner—Professor NIVEN.

N.B.—Subject to the modifications pointed out below, this Paper was also given to candidates of the Second Year in Engineering.

1. The rectangle under the diagonals of a quadrilateral inscribed in a circle is equal to the sum of the rectangles under its opposite sides. State and prove the converse of this theorem.

2. Solve the equations—

$$\frac{1}{a}\sqrt{x^2-a^2} + \frac{1}{b}\sqrt{x^2-b^2} = \frac{1}{c}\sqrt{x^2-c^2},$$

$$x(x-1)(x-2)(x-3) = 24.$$

3. Two substances are mixed in three different ways, viz., in the proportions $a : b$, $c : d$, $e : f$ and the prices of the first and second mixtures are respectively A and B shillings per pound; find the price of the third mixture.

4. Sum the two following series, explaining the type to which they belong, and the general method of summing series of this type:—

$$1^2 + 2^2 + 3^2 + \dots \text{ to } n \text{ terms;}$$

$$1 \cdot 3 + 2 \cdot 4 + 3 \cdot 5 + \dots \text{ to } n \text{ terms.}$$

5. Assuming the expansion of $\log_e(1+x)$, prove that—

$$\log_e(n+1) = \log_e n + 2 \left\{ \frac{1}{2n+1} + \frac{1}{3} \cdot \frac{1}{(2n+1)^2} + \frac{1}{5} \cdot \frac{1}{(2n+1)^3} + \dots \right\}.$$

6. Express in the duodecimal scale the fraction 245·632.

7. Find a general expression for all angles which have the same tangent.

Find x from the equation $\cot^{-1} \frac{1}{x} + \cot^{-1} \frac{2}{x} + \cot^{-1} \frac{3}{x} = \pi$, and prove that

$$\text{if } \tan \frac{\theta}{2} = 2 \tan \frac{\phi}{3}, \text{ then } \sin \theta = \frac{4 \sin \phi}{3 + 5 \cos \phi}.$$

8. Find, in terms of the sides of a triangle, the radius of the circle which circumscribes it.

If the lines which bisect the angles A, B, C of a triangle meet the circumscribing circle in D, E, F prove that the area of the hexagon formed by these 6 points = $R \cdot s$ where R is the radius of the circle and $2s$ is the perimeter of the triangle ABC, and that $AD \cdot BC = BE \cdot AC + CF \cdot AB$, AD being greater than either BE or CF.

9. What is a superior limit to the roots of an equation, and investigate a rule for finding such a limit?

How can the result be applied to find the superior and inferior limits of both the positive and negative roots?

10. Determine the equation of a straight line in the form $\frac{x}{a} + \frac{y}{b} = 1$.

Find the equations of the straight lines which pass through the point of intersection of the lines $2x - y - 2 = 0$, $x + 2y - 2 = 0$ and bisect (1) one of the angles between the lines, (2) the portion of the axis of y which they intercept between them.

11. Determine the nature, position, and magnitude of the curve represented by the equation $x^2 + y^2 = Ax + By$.

Obtain also the equations of the tangents to it at the points where it cuts the co-ordinate axes.

12. Find the locus of the intersection of the tangents to a parabola with the perpendiculars on them from the focus.

13. Find the equation of the tangent to an ellipse at any point whose co-ordinates are given.

14. If two lines be perpendicular to the same plane, they shall be parallel to each other.

[N.B.—Candidates for the Engineering Scholarship of the Second Year substituted for questions 10, 11, 12, 13 above the following]:—

10. Prove that the sum of two sides of a spherical triangle is greater than the third side.

Prove also that this sum is greater than double the arc of the great circle drawn from an angle of a triangle to the middle point of the base.

11. Prove that the sines of the angles of a spherical triangle are proportional to the sines of the opposite sides.

If the arcs of great circles bisecting respectively the angle A and its supplement meet BC in D, D'; and if M be the middle point of DD' prove that—

$$\tan MD' : \tan \frac{a}{2} :: \tan \frac{b+c}{2} : \tan \frac{b-c}{2}$$

SENIOR SCHOLARSHIPS.

I.—ANCIENT LANGUAGES AND HISTORY.

GREEK.

Examiner, Professor BOULGER.

Translate:—

ὡς ἄρ' ἔφαν μνηστῆρες· ἀνὴρ πολύμητις Ὀδυσσεύς,
αὐτίκ' ἐπεὶ μέγα τόξον ἐβάστασε καὶ ἰδε πάντη,
ὡς ὅτ' ἀνὴρ φόρμιγγος ἐπιστάμενος καὶ ἀειδῆς
ῥηϊδίως ἐτάσσουσε νέφ' περὶ κάλλεσι χορδῶν,
ἄψας ἀμφοτέρωθεν εὐστρεφὲς ἔντερον αἰδῶ,
ὡς ἄρ' ἄτερ σπουδῆς τάσσεν μέγα τόξον Ὀδυσσεύς.
δεικτερῇ δ' ἄρα χειρὶ λαβὼν περὶσσοτο νευρῶν
ἢ δ' ὑπὸ καλὸν αἶεσε, χελιδόνι εἰκέλη αὐδῆν.
μνηστῆρσιν δ' ἄρ' ἄχος γένετο μέγα, πᾶσι δ' ἄρα χροῶς
ἐπράττετο. Ζεὺς δὲ μεγάλ' ἔκτυπε σήματα φαίνων·
γῆθησέν τ' ἄρ' ἔπειτα πολέυθλας δῖος Ὀδυσσεύς,
ὅττι βᾶ οἱ τέρας ἦκε Κρόνου παῖς ἀγκυλομήτεω.
εἴλετο δ' ὠκὺν διστόν, ὃ οἱ παρέκειτο τραπέζῃ
γυμνός· τοὶ δ' ἄλλοι κοίλῃς ἔντοσθε φαρέτρῃς
κέλατο, τῶν τάχ' ἔμελλον Ἀχαιοὶ περὶσσεσθαι.
τόν ῥ' ἐπὶ πῆχει ἔλυν ἔλκεν νευρὸν γλυφίδας τε,
αὐτόθεν ἐκ δέφροιο καθήμενος, ἦκε δ' διστόν
ἄντα τιτυσκεόμενος, πελέκειν δ' οὐκ ἡμβροτε πάντων
πρώτης στελεειῆς, Ζεὺς δ' ἀμπερές ἦλθε θύραζε
ἰὸς χαλκωβαρῆς. ὃ δὲ Τηλέμαχον προσέειπεν·

Appendix D.
Scholarship
Examinations.

"Τηλέμαχ', οὐ σ' ἔξεινος ἐνὶ μεγάροισιν ἐλέγχει
ἥμιος, οὐδέ τι τοῦ σκοποῦ ἡμβροτον, οὐδέ τι τόξον.
δὴν ἔκαμον τανύων' ἔτι μοι μένος ἐμπεδόν ἐστιν,
οὐχ ὥς με μνηστῆρες ἀτιμάζοντες θύονται.
νῦν ἔ' ὦρῃ καὶ δόρπον Ἀχαιοῖσιν τετυγέσθαι
ἐν φάει, αὐτὰρ ἔπειτα καὶ ἄλλως ἐψιάσθαι
μολπῇ καὶ φέρμιγγι· τὰ γάρ τ' ἀναθήματα δαιτός."

Odyssey.

ὦ Ζεῦ βασιλεῦ, νῦν μὲν Περσῶν
τῶν μεγαλόχων καὶ πολυάνδρων
στρατιὰν ὀλέσας
ἄστυ τὸ Σούσων ἢ δ' Ἀγβατάνων
πίθει θναφίρῃ κατέκρυψας·
πολλὰ δ' ἄταλαῖς χερσὶ καλύπτρας
καταπρεσόμεναι διαμυδηλέοις
δάκρυσι κόλπους
τίγγουσ', ἄλγους μετίχουσσαι.
αἱ δ' ἄβρογούοι Περσίδες ἀνδρῶν
ποθέουσαι ἰδεῖν ἁρτιζυγίαν,
λείκτρων τ' ἐνὶ νῆς ἄβροχίτωνες,
χλιδανῆς ἤβης τέρψιν, ἀφείσαι,
πενθοῦσι γόοις ἀκυρεστοτάτοις.
ἐγὼ δ' ἐξ ἑμῶν τῶν οἰχομένων
αἶρω δοκίμως πολυπενθῆ.
νῦν δ' ἡ πρόπασα μὲν στένει
γαί' Ἀοῖς ἐκκενομένη.
Πέρξης μὲν ἄγαγεν, τοτοῖ,
Πέρξης δ' ἀπώλεσεν, τοτοῖ,
Πέρξης δὲ πάντ' ἐπίσπε θυοφρόνως
βαρύνεισι ποντίαις.
τίπτε Δαρεῖος μὲν οὕτω τότ' ἀβλαβῆς ἐπ' ἦν
τόξαρχος πολυήταις,
Σουσιδαῖς φίλος ἄκτωρ ;
πεζοὺς τε καὶ θαλασσίους
δρόμπεροις εὐανώπειδες
νῆες μὲν ἄγαγον, τοτοῖ,
νῆες δ' ἀπώλεσαν, τοτοῖ,
νῆες παρωλίθοισιν ἐμβολαῖς,
ζυὰ δ' Ἰαόνων χέρας.
τοτὶ δ' ἐκφυγεῖν ἄνακτ' αὐτὸν ὥς ἀκούμεν
Θρήνης ἅμ' ἐπιδίηρεις
δυσχίμονες τε κελεύθους.

ÆSCHYLUS.

"Χρῆν μὲν, ὦ ἄνδρες Βοιωτοί, μηδ' ἐς ἐπινόειν τινα ἡμῶν ἐλθεῖν τῶν
ἀρχόντων ὥς οὐκ εἰκόες Ἀθηναῖοις, ἦν ἄρα μὴ ἐν τῇ Βοιωτίᾳ ἔτι καταλάβωμεν
αὐτούς, διὰ μάχης ἐλθεῖν. τῇν γὰρ Βοιωτίαν ἐκ τῆς ἐμέρου ἐλθόντες τεῖχος

ἐνοικοδομησάμενοι μίλλουσι φθείρειν, καὶ εἰσι δέητοι πολέμιοι ἐν ᾧ τε ἂν ^{Appendix D}
χωρὶς καταληφθῶσι καὶ ὅθεν ἐπελθόντες πολέμια ἔδρασαν. νυνὶ δ' εἰ τῷ ^{Scholarship}
καὶ ἀσφαλέστερον ἔδοξεν εἶναι, μεταγινώτω. οὐ γὰρ τὸ προμηθεύς, οἷς ἂν ^{Examina-}
ἄλλος ἐπὶ, περὶ τῆς σφετέρως ὁμοίως ἐνδέχεται λογισμὸν καὶ ὅστις τὰ μὲν
ἐαυτοῦ ἔχει, τοῦ πλείονος δὲ ἀρεγόμενος ἐκὼν τινι ἐπέρχεται. πάροιθεν τε
ἡμῖν στρατὸν ἀλλόφυλον ἐπελθόντα καὶ ἐν τῇ οἰκίᾳ καὶ ἐν τῇ τῶν πύλας
ὁμοίως ἀμύνεσθαι. Ἀθηναίους δὲ καὶ προσέτι ὁμόρους ὄντας πολλῶς μάλιστα
εἰλ. πρὸς τε γὰρ τοὺς ἀστυγείτονας πᾶσι τὸ ἀντίπαλον καὶ ἐλεύθερον καθί-
σταται, καὶ πρὸς τούτους γε εἴη, οἳ καὶ μὴ τοὺς ἐγγύς, ἀλλὰ καὶ τοὺς ἀποθεν
πειρῶνται δουλοῦσθαι, πῶς οὐ χρὴ καὶ ἐπὶ τὸ ἴσχατον ἀγῶνος ἐλθεῖν; (παρά-
δειγμα δὲ ἔχομεν τοὺς τε ἀντιπείρας Εὐβοίας καὶ τῆς ἄλλης Ἑλλάδος τὸ πολὺ
ὡς αὐτοῖς διέκειται) καὶ γινῶναι ὅτι τοῖς μὲν ἄλλοις οἱ πλησιόχωροι περὶ γῆς
ἔρων τὰς μάχας ποιοῦνται, ἡμῖν δὲ ἐς πᾶσαν, ἣν νικηθῶμεν, εἰς ὅρος οὐκ
ἀντίλεκτος παγίσσεται· ἐπελθόντες γὰρ βίη τὰ ἡμέτερα ἔχουσι. τοσούτῳ
ἐπικανθονότῳ ἐτέρων τὴν παρολίην τῶνδε ἔχομεν. εὐχασί τι οἱ λεγῶς
τοῦ θράσει τοῖς πύλας, ὥσπερ Ἀθηναῖοι νῦν, ἐπιόντες τὸν μὲν ἡσυχάζοντα
καὶ ἐν τῇ ἐαυτοῦ μόνον ἀμυνόμενον ἀδείεστερον ἐπιστρατεύειν, τὸν δὲ ἔξω
ὄρων προαπαντῶντα καὶ ἣν κυρὸς ᾖ, πολέμου ἀρχόντα ἥσσαν ἐτοίμως
κατέχειν. πείραν δὲ ἔχομεν ἡμεῖς αὐτοῦ ἐς τοῦσδε· νικῆσαντες γὰρ ἐν
Κορινθίᾳ αὐτούς, ὅτι τὴν γῆν ἡμῶν στασιαζόντων κατέσχον, πολλὴν ἀτίαν
ἐν Βοιωτίᾳ μέχρι τοῦδε κατεστήσαμεν. ὦν χρὴ μενοεινέας ἡμᾶς τοὺς τε
προσβυτέρους ὁμοιωθῆναι τοῖς πρὶν ἔργοις, τοὺς τε νεωτέρους πατέρων τῶν
τότε ἀγαθῶν γενομένων παῖδας πειρᾶσθαι μὴ αἰσχύναί τὰς προσηκούσας
ἀρετάς, πιστεύσαντας δὲ τῷ θεῷ πρὸς ἡμῶν ἵσθαι, οὗ τὸ ἱερὸν ἀνόμως
τειχίσαντες νέμονται, καὶ τοῖς ἱεροῖς ἃ ἡμῖν θουσαμένους καλὰ φαίνεται,
ὁμοῖοι χωρῆσαι τοῖσδε καὶ δεῖξαι ὅτι ὦν μὲν ἐφίενται πρὸς τοὺς μὴ ἀμνη-
μένους ἐπιόντες κτάσθωσαν, οἷς δὲ γενναῖον τὴν τε αἰτῶν ἀεὶ ἐλευθεροῦν
μάχῃ καὶ τὴν ἄλλων μὴ δουλοῦσθαι ἄδίκως, ἀνανταγώνιστοι ἀπ' αὐτῶν οὐκ
ἀπίσιν."

THUCYDIDES.

1. Give ten words, which are to be found in the *Odyssey*, but not in the *Iliad*.

2. Enumerate the *Dramatis Personæ* of the *Persæ*, and show how they are severally connected with the action of the play.

3. In the above passage from *Thucydides* write explanatory notes, where the syntax appears to you to require elucidation.

Translate the following into Greek verse:—

Mepl. Now, Faustus, ask me what thou wilt.

Faust. First will I question thee about hell.

Tell me, where is the place that men call hell?

Mepl. Under the heavens.

Faust.

Ay, but whereabout?

Mepl. Within the bowels of these elements,
Where we are tortured and remain for ever.

Hell hath no limits, nor is circumscribed

In one self-place; for where we are is hell;

And where hell is, must we for ever be:

And to conclude, when all the world dissolves,

And every creature shall be purified,

All places shall be hell that are not heaven.—MARLOWE.

Appendix D. Translate the following into Attic prose :—

Scholarship
Examinations.

The independence of character thus fostered by the peculiar constitutions of these petty states, was still further promoted by the circumstances of their situation. Their uninterrupted wars with the infidel—the necessity of winning back from him, inch by inch, as it were, the conquered soil—required the active co-operation of every class of the community, and gave to the mass of the people an intrepidity, a personal consequence, and an extent of immunities, such as were not enjoyed by them in any other country of Europe. The free cities acquired considerable tracts of the reconquered territory, with rights of jurisdiction over them, and sent their representatives to Cortes, near a century before a similar privilege was conceded to them in England. Even the peasantry, so degraded, at this period, throughout the rest of Europe, assumed under this state of things a conscious dignity and importance, which are visible in their manners at this day; and it was in this class, during the late French invasions, that the fire of ancient patriotism revived with greatest force, when it seemed almost extinct in the breasts of the degenerate nobles.—PESCOTT.

LATIN.

Examiner, Professor LEWIS.

Subject for a Latin essay :—

Omne vafer vitium ridenti Flaccus amico
Tangit, et admissas circum praeordia ludit,
Callidus excusso populum suspendere naso.

PERSIUS, *Satire I.*

Translate into Latin verse :—

It was not by vile loitering in ease
That Greece obtain'd the brighter palm of art;
That soft yet ardent Athens learn'd to please,
To keen the wit, and to sublime the heart,
In all supreme! complete in every part!
It was not thence majestic Rome arose,
And o'er the nations shook her conquering dart:
For sluggard's brow the laurel never grows;
Renown is not the child of indolent repose.

II.—MODERN LANGUAGES, LITERATURE, AND HISTORY.

LANGUAGE AND LITERATURE OF ENGLAND.

Examiner, Professor ARMSTRONG.

1. Write a brief history of the East Midland dialect.
2. Sketch the history of the English Drama from the accession of Elizabeth to the accession of James II.
3. Reproduce as accurately as you can Dryden's character of Ormond.
4. When was the First Book of *The Excursion* written?
5. Relate the story of The Wanderer.
6. Analyze and criticise the blank verse of the First Book of *The Excursion*.

7. What appears to be the moral purport of *The Rime of the Ancient Mariner*?

8. What particular elements in Coleridge's genius appear to you to find fullest play in *Christabel* and *The Ancient Mariner*? (Illustrate your remarks, as far as possible, by quotations.) Scholarship
Examinations.

9. Describe the scene in *Peveril of the Peak* in which Julian, returning from the Isle of Man, arrives at his father's castle; and the scene in which King Charles first appears.

10. Quote the lines in *Adonais* in which Shelley describes Byron, Moore, Leigh Hunt, and himself.

11. Whom does Shelley particularize as "The inheritors of unfulfilled renown"?

12. Give the substance of Lamb's criticism of the character of Malvolio.

MODERN HISTORY.

Examiner—PROFESSOR ARMSTRONG.

1. Give the date and terms of the Scottish Union.

2. What were the grounds of the vote of censure passed by the House of Commons on Marlborough?

3. Give an account of Mar's Rebellion.

4. Give an account of the repeals of the Triennial Acts and the enactment of the Septennial Act.

5. Sketch the history of the Rockingham Whigs.

6. Write a brief account of the life and character of the younger Pitt.

7. Describe the successes of British Arms in Italy in 1806.

MODERN LANGUAGES.

Examiner, PROFESSOR DE VERICOUR.

Translate :—

The extensive country of which La Vendée is the centre, comprehends a much larger space than properly bears that name, as it includes a considerable portion of the departments of Maine and Loire, of Loire Inférieure, and of Les deux Sèvres, as well as La Vendée proper. The soil is not fit for the plough, but admirably adapted for the raising of cattle, and lies divided into pastures of small extent, but very rich in produce, which are scattered among groves and forests, so extensive that the whole district is known by the name of Bocage, or Thicket. The peasants inhabited each his little separate farm, all were easy and independent, and none possessed overgrown wealth. They were little oppressed by the public burdens, having a dispensation from the heaviest, on condition of their maintaining the various cuts and canals by which their country is drained. These canals, joined to the extreme badness of the roads, the intervention of numerous hedges and thickets, and the frequent rains, render La Vendée very inaccessible unless to the natives, who, familiar with these difficulties, are accustomed to bound over the obstacles, by means of a pole or quarter-staff, guarded with iron, which they are wont to carry, and which, in the course of the war, they sometimes used as a formidable weapon.—SIR WALTER SCOTT.

Appendix D.
Scholarship
Examinations.

Misfortune seldom comes singly. You do not look so old as you are. Things remain in the same state. Honesty is the best policy. The windows of my room look into the street. All is not gold that glitters. A man cannot serve two masters. The workman is known by his work. Everything has its good and bad side.

FRENCH LITERATURE.

State what you know of Port-Royal, of the Hotel Rambouillet, and of the pulpit eloquence during the reign of Louis XIV.

GERMAN LITERATURE.

State what you know of the life and works of Jean Paul Friedrich Richter, Herder, and Wieland.

ITALIAN LITERATURE.

Give a brief account of the classical Renaissance in Italy during the fourteenth century.

State what you know of Dante.

III.—MENTAL AND SOCIAL SCIENCE.

POLITICAL ECONOMY.

Examiner, Professor MILLS.

1. State the circumstances which determine the general rate of wages—say how they are affected—
 - a. By trades-unions.
 - b. By the introduction of machinery.
 - c. By extensive emigration.
 - d. By high price of provisions.
2. State the circumstances which determine the general rate of profits—say how they are affected—
 - a. By the introduction of machinery.
 - b. By the decreasing fertility of the soil.
 - c. By high price of provisions.
3. Discuss the economical effects of the system of Ulster tenant-right.
4. State and examine Mill's reasoning as to the incidence of import duties.
5. Examine the principal objections which have been made to the Bank Charter Act.
6. Explain the action of the several circumstances which affect the Exchanges.

VII.—NATURAL HISTORY.

BOTANY AND ZOOLOGY.

Examiner, Professor HARKNESS.

1. What is the nature and form of an urceolate calyx? Give an instance of a plant possessing one.
2. Describe the fructification of *Fungi*.
3. What is there in connexion with the ovules of gymnosperms distinguishing them from angiosperms?

4. To what order is *Zostera* referable? Under what conditions does it exist? Appendix D.
5. Describe the characters of the *Laureacea*. Scholarship
6. What is the nature and position of the madreporiform tubercle of the *Echinodermata*? Examination.
7. To what class do *Cirripedes* belong? Describe their characters.
8. Indicate the structure of *Tetrahbranchiate Cephalopods*.
9. What is the form of the articular surfaces of the centre of the vertebra in *Ophidians*?
10. What is there peculiar in connexion with the parietal bones in *Cetacea*?

PHYSICAL GEOGRAPHY AND GEOLOGY.

Examiner, Professor HARKNESS.

- Describe the nature and origin of a delta.
- What is the nature of volcanic ash, of scoria, and of lava?
- What is the direction of the winds known as Etesians? Over what area do they blow?
- Under what circumstances are fossils sometimes found in connexion with volcanic products?
- What is the nature of the rock known as obsidian?
- Where has the earliest evidence of the occurrence of the remains of sponges been met with?
- Mention the members which form the Lower Silurians of Great Britain; and indicate their characteristic fossils.
- In what respect do the Devonian rocks differ from the Old Red Sandstones?
- Where in England are the Neocomians represented?
- What are the affinities of the *Dinotherium*? What is the position of its remains?

SESSIONAL EXAMINATIONS—FIRST YEAR.

GREEK.

Examiner, Professor BOULGER.

Translate:—

I.

κραυγῆς ἀκούσας εἷς ἀφύκνῃην, † πάτερ,
σπευδὲν· τὸ μέγιστον πρῶτον ἰδ' ἤτινι στίχους
οὐκ οἶδα, βουλομένη δ' ἂν ἐκ εἶθεν κλέω.
ἔα, τί χρῆμα; σὴν δάμαρθ' ὄρω, πάτερ,
νικέειν· μέγιστον θαύματος τοῦ ἄλκιμον'
ἦν ἄρτιως διακονῶ, ἢ εἰς τὸς τοῦ
ὄπτι χρόνον παλαιὸν ἐπέδραστο.
τί χρῆμα πάσχει; τῷ τρόπῳ διέλλεται;
πάτερ, πεθέσθαι βούλομαι οἶδεν πάρα
σγῆς; σιωπῆς δ' οὐδὲν ἔργον ἐν κακοῖς·
ἢ γὰρ ποθοῦσα πάντα καρδίᾳ κλείειν
ἐλὼν τοῖς κακοῖσι λέγων οὐδ' ἄλλοκεται.
οὐ μὲν φίλους γε ἐκείνῃ μάλλον ἢ φίλους
κρίπτειν εἰκαίον σὰς πάτερ δυσπραΐα

EURIPIDES.

Sessional
Examina-
tions.

Appendix D.

Sessional
Examinations.

II.

ἱεροτάμους δὲ ποσάπους εἰν Πύρρης μὲν ἔφη εἶναι, παρίεσθαι δ' ἀπὸ τοῦ Τιριβάζου στρατεύματος, ὅπως ἐπιτήδεα λάβει. οἱ δ' ἥρώτων αὐτὸν τὸ στρατεύμα ὀπείσον τε εἰν καὶ ἐπὶ τίνι συνελθύνειν.† ὁ δὲ εἶπεν ὅτι Τιριβάζος εἰν ἔχων τήν τε ἑαυτοῦ δύναμιν καὶ μισθοφόρους Χέλυβας καὶ Ταίχους· παρίεσθαι δὲ αὐτὸν ἔφη ὡς ἐπὶ τῇ ὑπερβολῇ τοῦ ἔρους ἐν τοῖς σκηνώεσσι ὕπερ μοναχῶν εἰν πορεία, ἐνταῦθα ἐπιθησόμενον† τοῖς Ἑλλήσιν ἀκούσας τοῖς στρατηγοῖς ταῦτα ἰδοῦναι τὸ στρατεύμα συναγαγὼν καὶ ἐὼς φύλακας καταλιπόντας καὶ στρατηγὸν ἐπὶ τοῖς μένουσι Σοφαίνετον Στυμφάλιον ἱπορίεοντο ἔχοντες ἡγήματα τὸν ἀλόντα† ἀνθρώπων. ἰπειλὴ δὲ ὑπερίβαλλον τὰ ἔρη, οἱ πολαστοὶ πρῶτοντες† καὶ κατεξόντες τὸ στρατεύμα ἐκ ἱμεῶν τοὺς ὀπλίτας, ἀλλ' ἀνακραγόντες† ἴδον ἐπὶ τὸ στρατεύμα. οἱ δὲ βάρβαροι ἀκούσαντες τὸν θόρυβον εὐχ ὑπέρμεναν, ἀλλ' ἔρπον· ὅπως δὲ καὶ ἀπὸ θανάτου τινος τὸν βαρβάρων καὶ ἱπποὶς ἤλωσαν εἰς εἰς καὶ ἡ σκηνὴ ἢ Τιριβάζου ἰδῶν καὶ ἐν αὐτῇ κλίνει ἀργυρέπαιδες καὶ ἱερῶματα καὶ οἱ ἀργυρέπαιδες καὶ οἱ εὐνοχτοὶ φάσκοντες εἶναι.

ΞΕΝΟΦΩΝ.

III.

μετὰ ταῦτα ἀναστὰς εἶπεν Ἀγασίας, Ἐγώ, ὦ ἄνδρες, ὁμνυμι θεοὺς καὶ θεὰς ἢ μήν μήτι με Ξενοφῶντα κελύσαι ἀφελίσθαι τὸν ἄνδρα μήτι ἄλλον ὁμῶν μηδὲνα· ἴδοντι δὲ μοι ἄνδρα ἀγαθὸν ἀγόμενον τῶν ἡμῶν λοχιῶν ὑπὸ Διείππῳ, ὃν ὁμῶς ἐπίστασθαι ὁμᾶς πρῶτοντα, δεινὸν ἰδοῦναι καὶ ἀρετὴν ὁμολογῶ καὶ ἡμεῖς μὲν μὴ ἰδῶμεν καὶ ἡμεῖς μὲν μὴ ἰδῶμεν, ὥστε Ξενοφῶν λέγει, παρασχέσω κρίναιτι Κλεάνδρῳ ἢ, τι ἂν βούληται ποιῆσαι· τούτου ἵνα καὶ μήτι πολέμῳ Λακιδαιμονίους σώξοισθαι τε ἀσφαλῶς ὑποίθεμε ἕκαστος. συμπήφατε μέντοι μοι ὁμῶν αὐτῶν διόμενοι πρὸς Κλεάνδρον οἵαντες, ἐν τι ἐγὼ παραλείπω, καὶ λήξουσιν ὑπὲρ ἡμῶν καὶ πράξουσιν. ἐκ τούτου ἴδωκεν ἡ στρατὸς οὕσαντες βούλοιστο προελόμενοι εἶναι. ὁ δὲ προελίτε τοὺς στρατηγοὺς. μετὰ ταῦτα ἱπορίεοντο πρὸς Κλεάνδρον Ἀγασίας καὶ οἱ στρατηγοὶ καὶ ὁ ἀραιεὲς ἀνὴρ ὑπὸ Ἀγασίου.

ΞΕΝΟΦΩΝ.

Parse all words marked thus † in the above.

GRAMMAR AND COMPOSITION.

1. Decline in full :—ναύτης—μήτηρ—γῆρας—μειζων—εἶρας.
2. Write out, in the contracted form, the imperfect passive of δουλέω. Distinguish ἔστην and ἔστησα. Write out the aorist of ἔημι. Distinguish βούλευσαι—βουλεύσαι—βούλευσαι.
3. State generally the difference in meaning of the aorist and imperfect tenses. What is an historic present? What is the force of ἄρα with the imperfect?
4. Translate into Attic prose :—

When they arrived at the river they saw the enemy in great numbers on the opposite side. This disheartened them exceedingly, for the river was deep, and the current so strong, that they could not hold their arms in crossing, unless they raised them above their heads. Some young men, however, were lucky enough to discover a shallow ford higher up, at a place where the cavalry of the enemy could not approach, and a detachment of the Greeks, having crossed at this point, put to flight the troops of the Satrap on the opposite side.

LATIN.

Examiner, Professor LEWIS.

Appendix D.
Sessional
Examina-
tions.

Translate :—

HORACE—*Epistles* II., ii., 126-140.

Prætulærim scriptor delirus inersque videri,
 Dum mea delectent mala me vel denique fallant,
 Quam sapere et ringi. Fuit haud ignobilis Argis,
 Qui se credebat miros audire tragicos
 In vacuo lætus sessor plausorquæ theatro,
 Cetera qui vitæ servaret munia recto
 More, bonus saue vicinus, amabilis hospes,
 Comis in uxorem, posset qui ignoscere servis
 Et signo læso non insanire lagæne,
 Posset qui rupem et puteum vitare patentem :
 Hic ubi cognatorum opibus curisque refectus
 Expulit helleboro morbum bilemque meraco,
 Et redit ad esse, "Pol, me occidistis, amici,
 Non servastis" ait, "cui sic extorta voluptas
 Et dentus per vim mentis gratissimus error."

CICERO—*Tusculan Disputations*, I., vi.

- A. Adeoue me delirare censes, ut ista esse credam ?
 M. An tu hæc non credis ?
 A. Minime vero.
 M. Male hercule narraas.
 A. Cur ? quaeso.
 M. Quia disertus esse possem, si contra ista dicerem.
 A. Quis enim non in eius modi causa ? Aut quid negotii est hæc
 poetarum et pictorum portenta convincere ?
 M. Atqui pleni libri sunt contra ista ipsa disserentium philoso-
 phorum.
 A. Inapte sana. Quis enim est tam excoers quem ista moveant ?
 M. Si ergo apud inferos miseri non sunt, ne sunt quidem apud
 inferos ulli.
 A. Ita prorsus existimo.
 M. Ubi sunt ergo ii, quos miseros dicis, aut quem locum incolunt ?
 Si enim sunt, nusquam esse non possunt.
 A. Ego vero nusquam esse illos puto.
 M. Igitur ne esse quidem ?
 A. Prorsus isto modo, et tamen miseros ob id ipsum quidem, quia
 nulli sint.

1. Name the most celebrated contemporaries of Horace.
2. Give some account of Menander, Roscius, Apelles, and Lysippus.
3. Explain the words *fretus*, *platea*, *trutina*, *plagosus*, *scrinium* and *temetum*.
4. When did the first dramatic representation take place at Rome ?
5. State the opinions of some ancient philosophers concerning the nature of the soul.
6. Write in chronological order a list of the principal Latin authors who preceded Cicero, and add brief notices of their writings.

Appendix D.

Sanford
and Prize
Examina-
tions.

Translate into Latin :

Meditate upon this daily, that you may leave life with an even mind. He told many falsehoods about his age, that he might appear younger than he is. Do not learn many things, but useful things. He spoke much that he might be thought wise. Agricultural affairs are of such a kind that the winds and seasons govern them. I know that my father does not learn many things, but much.

Translate into Latin elegiacs :

But for thee may Samian jars prolong joyful banquets,
And slippery earth brought by Cumæan wheel.
But neither do distinct rivers glide on the same bank,
The cold Earotas and the poplar bearing Po.
Snow-white heifers are led, the people applauding,
Heifers which the Faliscan grass has fed in its plains.

THE ENGLISH LANGUAGE, &c.

Examiner, PROFESSOR ARMSTRONG.

1. Exhibit the mutes in a tabular form, showing the distinctions between the several classes.
2. Give the laws which regulate the permutation of consonants throughout the Aryan languages.
3. Name the principal writers of prose and verse who flourished in England before the Norman Conquest.
4. Decline *cude*, *wylen*, and *treow*.
5. State the sources from which the following words are derived, and the periods at which they have been added to our language :—*Chester*, *bishop*, *beck*, *mattock*, *whiskey*, *baron*.
6. Explain the nature of the influence of the Norman Conquest upon the English language.
7. Explain the conditions under which the East Midland Dialect became the literary dialect of England.
8. Give an account of Chaucer and his literary contemporaries.
9. Name the principal sources from which Chaucer has derived material for his works.
10. Make a metrical analysis of the following passage, explaining the metrical and grammatical rules which guide you ; and paraphrase the passage accurately and neatly in modern English prose :—

“ A Frankeleyn was in his compagne ;
Whit was his berde as is the dayesye.
Of his complexioun he was sangwyn.
Wel lovede he in the morwe a sop in wyn.
To lyven in delite was al his wone,
For he was Epicurus owne sone,
That heeld opynyoun that pleyn delyt
Was verrailly felicité perfyte.
An houshaldere, and that a gret, was he ;
Seynt Julian he was in his countré.”

11. What are the principal influences by which the English language has been affected since the era of Chaucer ?
12. State what you know of the English dialects now spoken.

MODERN LANGUAGES.

Examiner, Professor DE VERICOUR.

Appendix D.

Sessional
Examina-
tions.

N.B.—The following Paper was common to Students in Arts, Engineering, and Medicine of the First Year.

Translate into French :

I. *Plautus* first exposed upon the stage the wretchedness of avarice; the punishment of a selfish love of gold, not only in the life of pain it has cost to acquire it, but in the terrors that it brings; in the disordered state of mind, which is haunted as by some mysterious guilt, by the consciousness of secret wealth. The character of *Eucio*, in the *Aulularia*, is dramatic, and, as far as we know, original. The moral effect requires, perhaps, some touches beyond absolute probability; but it must be confessed, that a few passages are overcharged. *Molière* borrowed *L'Avare* from this comedy; and I am not aware that the subject, though so well adapted for the stage, had been chosen by any intermediate dramatist. He is indebted, not only for the scheme of his play, but for many strokes of humour, to *Plautus*. But this takes off little from the merit of this excellent comedy.—HALLAM.

II. DON JOHN OF AUSTRIA AT LOUVAIN.

Meantime, Don John of Austria came to Louvain. The object with which Philip had sent him to the Netherlands, that he might conciliate the hearts of the inhabitants by the personal graces which he had inherited from his imperial father, seemed in a fair way of accomplishment; for it was not only the venal applause of titled sycophants that he strove to merit, but he mingled gaily and familiarly with all classes of citizens. Everywhere his handsome face and charming manner produced their natural effect. He dined and supped with the magistrates in the town-house, honoured general banquets of the burghers with his presence and was affable and dignified, witty, fascinating, and commanding by turns. . . . At Louvain, the five military guilds held a solemn festival. The usual invitations were sent to the other societies and to all the martial brotherhoods the country round. Gay and gaudy processions, sumptuous banquets, military sports, rapidly succeeded each other. Upon the day of the great trial of skill, all the high functionaries of the land were, according to custom, invited, and the Governor was graciously pleased to honour the solemnity with his presence. Great was the joy of the multitude when Don John, complying with the habit of imperial and princely personages in former days, enrolled himself, cross-bow in hand, among the competitors. Greater still was the enthusiasm when the conqueror of Lepanto brought down the bird, and was proclaimed king of the year, amid the tumultuous hilarity of the crowd.

MOTLEY: *"The Rise of the Dutch Republic."*

1. Give the principal rules of the French Syntax on the subjunctive mood.
2. Explain the full meaning of *désagré* by tracing its etymology.
3. How do the French express such sentences as these?—He is to read—I have just seen the Queen—The Prince has just past—You should have stopped.
4. Characterize the genius of *Cornille* and that of *Racine*; say which are considered their best plays.
5. State what you know of the life and works of *Lafontaine*.

MATHEMATICS.

Examiner, PROFESSOR NIVEN.

Appendix D.

Sessional
Examina-
tions.

N.B.—This and the following "Prize Paper" were common to First Year's Students in Arts and Engineering.

PASS PAPER.

1. Upon what axioms has it been proposed to construct the theory of parallel lines?

Prove that, if two straight lines are parallel and are intersected by a third straight line, the alternate angles are equal.

2. In any triangle the square on a side opposite an acute angle is less than the squares on the sides containing the acute angle by twice the rectangle contained by either of those sides, and the projection on it of the other side.

ABCD is the diameter of two concentric circles, P, Q any points on the outer and inner circles respectively. Prove that

$$BP^2 + CP^2 = AQ^2 + DQ^2.$$

3. In the same circle equal arcs are subtended by equal chords; and of two unequal minor arcs, the greater is subtended by the greater chord.

If a triangle be inscribed in a circle, and the middle points of the arcs subtended by the sides be joined to form a new triangle, and the process be repeated with this new triangle and so on. Prove that the triangles so formed tend continually to become equilateral.

4. Draw the common tangents to two given circles.

5. State Euclid's definition of proportion. Explain what is meant by duplicate ratio, and mention the propositions in the sixth book in which it is employed.

Prove that twice the perpendicular from an angle of a rhombus upon one of the opposite sides is a fourth proportional to a side and the two diagonals.

6. State and prove the Commutative Law in the multiplication of vulgar fractions.

Work out the cubes and the product which occur in the equality— $(-x+y-z)^2 + (x-y-z)^2 + 4z^2 = 6x(-x+y-z)(x-y-z)$, and prove the equality.

Find all the factors of $x^3 - a^3 - 6a(x^2 - a^2) + 11a^2(x - a)$.

7. Find the Highest Common Divisor of the expressions—

$$2x^3 - 7x^2 + 7x - 2 \text{ and } 2x^4 + 2x^3 - 9x^2 - 8x + 4.$$

Add together $\frac{1}{(a+b)(a+2b)} - \frac{1}{(a-3b)(a+2b)} + \frac{3}{a^3 - 2ab - 3b^3}$.

8. Extract the square root of $9x^3 - 30ax - 3a^2x + 25a^2 + 5a^3 + \frac{a^4}{4}$.

9. Solve the equations—

$$\frac{27x-8}{10} - \left(\frac{3x-2}{5} - \frac{\frac{3x-2}{5} - 2}{7} \right) = 36;$$

$$\frac{1}{2x+1} = \frac{1}{2x-3} + \frac{1}{2x-3};$$

$$\left. \begin{array}{l} \sqrt{x} - \sqrt{y} = 1 \\ x + y = 25 \end{array} \right\}.$$

$$\left. \begin{array}{rcl} 2x & - & z & - & u & = & 5 \\ & - & y & + & 3z & + & 2u & = & 2 \\ x & - & 2y & & + & u & = & 6 \\ x & + & y & + & z & & = & 0 \end{array} \right\}.$$

10. Define a rational quantity and a surd, and prove that the sum of two simple surds cannot be equal to a rational quantity. Appendix D.
Sessional Examinations.

Extract the square root of $\frac{4\sqrt{2}-\sqrt{7}}{4\sqrt{2}+\sqrt{7}}$, and find a factor which will rationalize $1-2\sqrt{2}+\sqrt{3}$.

11. Find the sum of an arithmetic series.

Continue the following series two terms further, and find their n^{th} terms—

$$5+\frac{2}{3}-2, \&c.$$

$$1\frac{1}{2}+\frac{1}{3}, \&c.$$

Find also, the sum of all the terms of the first series between the p^{th} and q^{th} terms, and the sum of all those of the second series after the 6^{th} term.

12. Define a logarithm, and prove that $\log \left(\frac{a}{b} \right) = \log a - \log b$.

Give a general account of what logarithmic tables contain, and how they are to be used.

13. Express the secant of an angle in terms of the cosecant.

Find the secants of 30° , 60° , 120° , and prove that—

$$(\sec 15^\circ + \operatorname{cosec} 15^\circ)^2 = 24.$$

14. Prove the following formulæ—

$$\cos(A+B) = \cos A \cos B - \sin A \sin B,$$

$$\tan \frac{A}{2} = \frac{\sin A}{1 + \cos A},$$

$$\cot \frac{A}{2} = \frac{\sin A + 3 \sin 2A + 2 \sin 3A}{\cos A + \cos 2A - 2 \cos 3A}.$$

15. Find the cosine of half the angle of a triangle in terms of the sides. If a, b, c be the sides, and A, B, C the angles, of a triangle, prove that—

$$\left(\frac{1}{b} - \frac{1}{c} \right) \cot \frac{A}{2} + \left(\frac{1}{c} - \frac{1}{a} \right) \cot \frac{B}{2} + \left(\frac{1}{a} - \frac{1}{b} \right) \cot \frac{C}{2} = 0.$$

PRIZE PAPER.

1. Define the nine points' circle of a triangle and prove its characteristic property. Determine also the position of its centre.

2. If a pencil of four rays be cut by any one transversal in a harmonic range, every transversal will cut it in a harmonic range.

The ranges $BD, CD', CE, AE', BF, AF'$ are harmonic ranges, and AD, BE, CF , meet in a point, prove that D', E', F' lie in a straight line.

3. Determine when $x^3 + ax^2$ is divisible by $x + a$.

Find the values of A, B , that $x^3 - Ax^2 + B$ may be divisible by $x^2 - (a+b)x + ab$.

4. Solve the equations $x^4 + x^2 y^2 + y^4 = a^4$, $x + y = b$.

Eliminate x, y, z , from the equations $y^2 - z^2 = a^2 y z^2$, $z^2 - a^2 = b^2 z x$, $x^2 - y^2 = c^2 x y^2$.

5. Investigate the theorem $\begin{vmatrix} a & b \\ c & d \end{vmatrix} \times \begin{vmatrix} \alpha & \beta \\ \gamma & \delta \end{vmatrix} = \begin{vmatrix} a\alpha + b\beta & a\gamma + b\delta \\ c\alpha + d\beta & c\gamma + d\delta \end{vmatrix}$,

and state the corresponding result for the product of two determinants of the third order.

Appendix D
Sessional
Examina-
tions.

Prove that $\left[\frac{y+z, x+z, x+y}{y^2+z^2, x^2+z^2, x^2+y^2} \right] = 2xyz(y-z)(x-z)(x-y).$

6. Assuming the Binomial theorem true for a positive integer, prove it true generally.

Prove that squares and products of x, y above the second degree being neglected—

$$\frac{(1-x)^{-1} + (1-y)^{-1}}{(1-x)^2 (1-y)^2} = 2 + \frac{3}{2}(x+y) + \frac{11x^2}{8} + xy + \frac{11}{8}y^2.$$

7. Investigate the expansion of $\log(1+x)$, and determine within what limits the series is convergent. Obtain series suitable for the ready calculation of $\log 10$.

8. Sum the series—

$$1^2.2^2 + 2^2.3^2 + 3^2.4^2 + \dots \text{ to } n \text{ terms.}$$

$$1.2x + 2.3x^2 + 3.4x^3 + \dots \text{ to infinity.}$$

$$\frac{1.2x}{1^1} + \frac{2.3x^2}{2^1} + \frac{3.4x^3}{3^1} + \dots \text{ to infinity.}$$

9. If $\cos A \tan a = \cos B \tan b$, and $\sin A \sin b = \sin B \sin a$, prove that

$$\tan \frac{A-B}{2} = \frac{\sin \frac{a-b}{2}}{\sin \frac{a+b}{2}} \text{ and that } \tan \frac{A+B}{2} = \frac{\cos \frac{a-b}{2}}{\cos \frac{a+b}{2}}.$$

10. If $A+B+C=180^\circ$, prove that

$$\cos A + \cos B + \cos C = 1 + 4 \sin \frac{A}{2} \sin \frac{B}{2} \sin \frac{C}{2}.$$

11. When there are two triangles having the three given parts B, b, c, and the parts a, B given in position, find the distance between the centres of the two circles inscribed in those triangles.

12. Prove that the nine points' circle of a triangle touches the inscribed circle.

SECOND YEAR.

GREEK.

Examiner, Professor BOULGER.

GRAMMAR AND COMPOSITION.

1. Contract δαυδῆ—ἀεθῶ—ζηλῶς—τιμῶν—δορία—χρυσίας—μισθῶν.

2. Give the stems of εἶδω—πείζω—ρήτωρ—ἤχω—γένος—ἔθος—αἰδώς.

Write a note upon the form of the genitive case in such words as βασιλείς and πόλις.

3. Give the verbal stems of the following:—πίσω—ἔξομαι—τείνω—βλάσκω—μαρθάνω—πίπτω—πύγγω.

Mention any verbs which strengthen the pure stem in the present and imperfect by prefixing a reduplication.

4. Comment upon the syntax of the following:—

a. ἐπιτίει δυνάτος εἶναι ἀρχην.

b. οἷσθ' ὅτι ὁ ἔρπασεν.

c. ἐνθῇ δ' ὕφανται γράμμασιν τοιαῖδ' ὕφαί.

d. οὐ μὴ προσοίσεις χεῖρα, βακχεύσεις δ' ἰὼν
μηδ' ἐξομόρξει μωρίαν τὴν σὴν ἐμοί.

Translate into Attic prose :—

Appendix D.

Themistokles the Athenian was celebrated for his miraculous power of wisdom and intellect. It is related that a very learned and accomplished man once came to him, and undertook to communicate to him the art of memory, which was at that time a new invention. When he inquired what was the use of that art, the professor replied, "to enable one to remember everything." Themistokles answered that he would oblige him more by teaching him to forget at pleasure than to remember; "For," said he, "I remember even against my will; but cannot forget when I would."

Translate into Greek verse :—

Intreat me not to leave thee, or to return from following after thee; for whither thou goest I will go; and where thou lodgest I will lodge; thy people shall be my people; and thy God my God.

Where thou diest will I die, and there will I be buried; the Lord do so to me, and more also, if ought but death part thee and me.

Translate :—

I.

IGN. ὦ τλημων, ὡς τ' ἀλλ' εὐτυχέσθ' οὐκ εὐτυχῆς.
 KP. σὲ δ' εἰ τίς; ὡς σου τὴν τεκοῦσαν ὀλίβισα.
 IGN. τοῦ θεοῦ καλεῖσθαι δοῖλας αἰμαί τ', ὦ γόνυ.
 KP. ἀνέστημα πόλεως, ἡ τινος πραθείης ὕπο;
 IGN. οὐκ οἶδα πλὴν ἐν' Ἀσλίου κεκλήμμεθα.
 KP. ἡμεῖς σ' ἀρ' αἰθες, ὦ ξέν', ἀντοιχεύομεν.
 IGN. ὡς μὴ εἰδὼθ' ἦτις μ' ἵτακιν ἐξ ἔπου σ' ἔβην.
 KP. ναοῖσι δ' οἰκῆς τοισὺν ἡ κατὰ στήγας;
 IGN. ἅπαν θεοῦ μοι δῶν', ἐν' ἂν λάβῃ μ' ἕπνοος
 KP. παῖς δ' ὦν ἀρίκον ναῦν ἡ ναυίας;
 IGN. βρέφος λόγουσιν αἱ δοκῶντες εἰδέναι.
 KP. καὶ τίς γάλακτι σ' ἐξέθρεψε Δελφίδων;
 IGN. εὐπώπορ' ἔγνωσ' μαστόν' ἡ δ' ἔθρεψε με
 KP. τίς, ὦ ταλαίτωρ'; ὡς νοσοῦσ' εἶπον νέσσοις.
 IGN. Φοῖβον προφήτης, μητὴρ' ὡς νομίζομεν.
 KP. εἰς δ' ἀνδρ' ἀρίκον τίνα τρεφὴν ἐκτεμήνοος;
 IGN. βωμὸν μ' ἔραβον στυγίων τ' αἰετίνος.
 KP. τάλανά σ' ἡ τεκοῦσα, τίς ποτ' ἦν δρα.
 IGN. ἀδίκημά του γυναικὸς ἐγενόμην ἴσως.

EURIPIDES.

II.

τί δῆρ' ἐμοὶ ζῆν ἡδύ; πρὸς τί χρηὴ βλάπην;
 πρὸς τὰς παρούσας ἡ παρελθούσας τόχας;
 εἰς παῖς δῆρ' ἦν μοι λοιπὸς ὀφθαλμὸς βίου
 τοῦτον κρανίον μέλλουσιν οἷς δοκῇ τάδε.
 σὺ δὲ θῆτα τοῖμοι γ' οὐκ ἀθλίου βίου
 ἐν τῷδε μὲν γὰρ ἱλπίς, εἰ σωθήσεται
 ἐμοὶ δ' οὐτιδὸς μὴ θανεῖν ἐπὶ τίκτου.
 ἰδοὺ προλαίπῳ βωμὸν ἦδη χερσὶ
 σφάζειν, φονεύειν, ζεῖν, ἀπαρτῆσαι δέρας.
 ὦ τίκτου, ἡ τεκοῦσά σ', ὡς σὲ μὴ θάνης,
 στείχω πρὸς Ἀἰθρῶν ἦν δ' ὑπεκάρμενος μένος,
 μέμνησο μητρὸς, οἷα τλᾶσ' ἀπαλόμην,

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tions.

καὶ πατρὶ τῷ σὺ δὲ φίλῳ φιλημάτων ἰὼν
δδάκρυά τι λείβων καὶ περιπτύσσων χεῖρας
λγ' οἷ' ἐπαῖα. πᾶσι δ' ἀνθρώποις ἀρ' ἦν
ψυχὴ τέκν'· ὅστις δ' αὐτ' ἀπειρας ὡν ψίγει,
ἥσσαν μὲν ἀλγυῖ, δυστυχῶν δ' εὐδαιμονεῖ.

EURIPIDES.

III.

Ἔτα σοφίζεται, καὶ φησὶ προσέειπαι, ἥς μὲν οἰσθῆναι ἤειπ' ἔχοντες ἐλπίς περὶ ἡμῶν
ἀμυλῆσαι, ὥσπερ δ', ὅταν αἰόμενοι περιβαίνει χρήματα τῷ λογιζέσθῃ, ἀν εὐχαρῶν ὡς αἱ
ψῆθοι καὶ μῦθον περιβῶ, συγχωρεῖται, αἰτῶ καὶ νῦν τοῖς ἐκ τοῦ λόγου φαινομένοις
προσβλίσθαι. θεάσασθε τοῖσιν ὡς σαφὲς, ὡς ἔσκεν, ὅτι φάσιν πᾶν ὅτι ἀν μὴ ἱσχυρῶς
ᾧ πεπραγμένον. ἐκ γὰρ αὐτοῦ τοῦ σοφοῦ τούτου παραδείγματος ὁμολόγηται ἴσως γ'
ἡμᾶς ὑπάρχον ἐγνωσμένους ἐπὶ μὲν λέγειν ὑπὲρ τῆς πατρίδος, αὐτὸν δ' ὑπὲρ Φιλίππου,
οὐ γὰρ ἂν μεταστάντων ἡμᾶς ἐλθῆτι μὴ τοιαύτης οὐσίας τῆς ἀπαρχοσύνης ἐπὶ τολμήσειας περὶ
ἐκατέρου. καὶ μὴν δεῖ γε οὐ δικαίως λέγει μετασθῆναι ταύτην τὴν δόξαν ἀέκῳ, ἐγὼ
διδάσκω ῥηδύνει, οὐ τιθεῖς ψήφους (οὐ γὰρ ἴσταιν δ' τῶν πραγμάτων αὐτοῦς λογισμὸς), ἀλλ'
ἀναμνηστικῶς ἔσται· ἐν βραχέει, λογισταῖς ἅμα καὶ μάρτυσι τοῖς ἀκούουσιν ἡμῖν
χρώμενος. ἡ γὰρ ἐμὴ πολιτεία, ἥς οὗτος κατηγορεῖ, ἀντὶ μὲν τοῦ θαρβαλοῦς μετὰ
Φιλίππου συνυμβαλῆναι εἰς τὴν χώραν, ὃ πάντες φάσιν, μεθ' ἡμῶν παραπολαβόμενος
ἐκείνων ἐκώδουν ἱστοίησιν, ἀντὶ δὲ τοῦ ἐν τῇ Ἀττικῇ τὸν πόλεμον εἶναι ἐπτακτίσας στάθην
ἀπὸ τῆς πόλεως ἐπὶ τοῖς Βοιωτῶν ἱρίαις γενέσθαι, ἀντὶ δὲ τοῦ τοῖς ληστὰς ἡμᾶς φέρον
καὶ ἄγειν ἐκ τῆς Βιθυλίας ἐν ἐρήνῃ τὴν Ἀττικὴν ἐκ θαλάττης εἶναι πάντα τὸν πόλεμον,
ἀντὶ δὲ τοῦ τὸν Ἑλλήσποντον ἔχειν Φόλιππον, λαβόντα Βοζάντιον, συμπολέμεν τοῖς
Βοζαντίαις μεθ' ἡμῶν πρὸς ἐκείνους.

DEMOSTHENES.

LATIN.

Examiner, Professor LEWIS.

Translate :—

CICERO—*Tusculan Disputations*, III., xxi.

Et queruntur quidam Epicurei, viri optimi—nam nullum genus est
minus malitiosum,—ne studiosè dicere contra Epicurum. Ita, credo,
de honore aut de dignitate contendimus. Mihi summum in animo bonum
videtur, illi autem in corpore : mihi in virtute, illi in voluptate. Et illi
pugnant et quidam vicinorum fidem implorant : multi autem sunt qui
statim convolent. Ego sum is, qui dicam me non laborare, actum
habitarum quod egerint. Quid enim? de bello Punico agitur? de
quo ipso quam aliud M. Catoni, aliud L. Lentulo videretur, nulla inter
eos concertatio unquam fuit. Hi nimis iracunde agant, præsertim quum
ab iis non sane animosa defendatur sententia, pro qua non in senatu,
non in contione, non apud exercitum neque ad censores dicere audeant.
Sed cum istis aliis, et eo quidem animo, nullum ut certamen institutum,
verum dicentibus facile cedam. Tantum admonebo : si maxime verum
sit ad corpus omnia referre sapientem sive, ut honestius dicam, nihil
facere nisi quod expediat sive omnia referre ad utilitatem suam, quoniam
hæc plausible non sunt, ut in sinu gaudeant, gloriose loqui desinant.

TERENCE—*Heauton Timorumenos*, Act II., Sc. iii., 44.

Texéntem telam stúdiocè ipsam offéndimus,
Medíocriter uestítam ueste lígabri

(Eius anuis opinor quae erat mœrtua)
Sine adro : tum ornatam ita uti ornantur sibi,
Nullâ mala re esse expositam muliebri.

Appendix D.
Serial
Examina-
tions.

Capillus passus proluxe et circum caput
Reiectus neglegenter, pax. CLAN. Syre mi, obsecro,
Ne me in laetitiam frustra conicias. SY. Anus
Subtèmen nebat: paneterea una ancillula
Erat; ea texebat una, pennis obsita,
Neglecta, imunda inlânâ. CLAN. Si haec sunt, Clînâ.
Vera, ita uti credo, quis test fortunatior?
Scin hanc quam dicit sordidatam et sordidam?
Magnûm hoc quoque signum est, dōminam esse extra nōxiā,
Quom cūis tam neglegētur internūtiū.

1. What are the topics of consolation mentioned by Cicero in this book?
2. Give the date of the erection of the Mausoleum at Halicarnassus, and name the artists who were employed upon it.
3. State the doctrines of Epicurus concerning atoms and the nature of the Gods.
4. Show that the plays of Terence were derived from Greek originals.
5. Discuss some various readings in the second act of the Heauton Timorumenos.
6. Explain the following inscription:—

CAV. II.
CVN. III.
GRAD. VIII.
CASINA.
PLAVTL.

7. Give an account of the Attic Dionysia.
What proof is there that slaves took part in them?

Translate into Latin:—

They cry out, that that scum of the state, your companions, must be expelled.

The line of the Gauls is overwhelmed with a cloud of light missiles.

You have held before me a bright light in so great a darkness of error and ignorance.

If any one has long lived in the dark, the sun of truth dazzles his eyes.

If you hate the light of truth, you will fly to the shade of error.

I was not so timid as to fear the cloud of your brow, after having steered the vessel of the state in such storms and waves, and brought it safe to port.

Translate into Latin Sapphics:—

O! Paullus! why do we pursue fugitive glory with unprofitable weapons! She rages like a warring Parthian, and returns wounds even from her back.

The noisy favour of the multitude refuses to be the guest of one roof; here with empty ear she gathers rumours, thence she mixes false with true.

Appendix D.
Sessional
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tions.

Here she hath clung, as if going to fix her nest; presently, when she hath deluded the empty breast with her vain tumult, with silent wing, she springs on high.

The following paper was also given to the Third Year's Class:—

Translate into Latin hexameters:—

Him blind antiquity profaned, not served,
With self-taught rites, and under various names,
Female and male, Pomona, Pales, Pan,
And Flora, and Vertumnus; peopling earth
With tutelary goddesses and gods,
That were not; and commending as they would
To each some province, garden, field, or grove.

Translate into Latin prose:—

It is indeed no uncommon thing to meet with men, who, by the natural bent of their inclinations, and without the discipline of philosophy, aspire not to the heights of power and grandeur; who never set their hearts upon a numerous train of clients and dependencies, nor other gay appendages of greatness; who are contented with a competency, and will not molest their tranquillity to gain an abundance. But it is not therefore to be concluded that such a man is not ambitious; his desires may have cut out another channel, and determined him to other pursuits; the motive however may be still the same; and in these cases likewise the man may be equally pushed on with the desire of distinction.

MATHEMATICS.

Examiner, Professor NIVEN.

1. On two straight lines OA , OB , respectively, are taken points A_1, A_2, B_1, B_2 , such that OB_1 is a harmonic mean between OA_1 and OA_2 , OB_2 between OA_1 and OA_2 , OB_1 between OA_1 and OA_2 , A_1, B_1 meet in C_1 , A_2, B_2 and A_1, B_2 in C_2 , A_2, B_1 and A_1, B_1 in C_3 ; prove that the four points O, C_1, C_2, C_3 lie in a straight line.

2. Prove that the sum of the excentric angles of points at the extremities of a system of parallel chords of an ellipse is constant; and apply this principle to find the locus of the intersections of the normals at the extremities of these chords.

3. Determine the curves which are represented by the general equation $Ax^3 + By^3 + 2Fxy + 2Ex + 2Dy + C = 0$.

Find the centre, eccentricity, and asymptotes of the curve—

$$(x - 2y + 1)(x + y - 2) = 3x - 2y.$$

4. Prove that the equation of the circle which circumscribes the triangle of reference, in trilinear co-ordinates, is $a\beta\gamma + b\gamma\alpha + c\alpha\beta = 0$.

If tangents be drawn to this circle at the angles of the triangle and form by their intersections a triangle $A'B'C'$, prove that AA', BB', CC' meet in a point, and find the co-ordinates of this point.

5. Prove that the equation—

$$(1 - x^2)\frac{d^2y}{dx^2} - 2x\frac{dy}{dx} + n(n+1)y = 0$$

is satisfied by $y = \frac{d^n(x^2 - 1)^n}{dx^n}$.

Show also (by applying Leibnitz's Theorem), that, if the above equation is true, the following is also true—

$$(1-x^2) \frac{d^{2+n}y}{dx^{2+n}} - 2x(n+1) \frac{d^{1+n}y}{dx^{1+n}} = 0.$$

Appendix D.
Sesional
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tions.

6. State and prove Taylor's Theorem, including Lagrange's addition. Expand $\sin^{-1}x$ in powers of x .

7. Prove that the curve $y = \frac{a^2(a-x)}{a^2+x^2}$ has three points of inflexion, one of which is $(-a, a)$, and that these three points lie in a straight line.

Trace the curve.

8. State and prove the property of the evolute from which its name is derived.

Prove that the evolute of the cycloid is an equal cycloid.

9. Investigate the general formulae employed for changing the independent variable.

Change the independent variable from x to t in the equation in question 5, where $t = \frac{1}{2} \log \frac{1-x}{1+x}$.

10. Determine the following integrals—

$$\int \frac{ax dx}{a^2 + x^2}, \quad \int_0^{2a} \sqrt{2ax - x^2} dx, \quad \int \frac{dx}{x(x+1)\sqrt{1-x^2}}.$$

11. Find a formula for the reduction of the integral $\int (ax + b\sqrt{x})^{-n} dx$.

12. Find the area of the curve $x^3 + y^3 - 3axy = 0$.

1. Parallelepipeds on the same base and between parallel planes are equal to each other. Prove this, and find an expression for the volume of a cylinder.

A conical frustum, bounded by two planes, one of which has twice the area of the other, is cut by a plane parallel to each of these planes, and midway between them; compare the volumes of the parts into which the frustum is cut.

2. State and prove the properties which connect a spherical triangle with its polar triangle.

Prove that any side of a spherical triangle is greater than the difference between the two non-corresponding angles of the polar triangle.

3. State the different cases of solution of right-angled spherical triangles, giving the formulae used in solving them. The exterior angle A of a spherical triangle is bisected by a great circle which meets BC produced in D ; prove that—

$$\sin \frac{A}{2} \cos \frac{A}{2} \sin \frac{A}{2} = \cos \frac{B+C}{2} \cos \frac{B-C}{2}, \text{ and that } \cos \frac{A}{2} \sin \frac{A}{2} \sin \frac{A}{2} \\ \cos \frac{A}{2} = \sin \frac{C-B}{2} \sin \frac{C+B}{2}.$$

4. State and prove Machin's series for calculating the value of π . What are its advantages?

Sum the series—

$$\cos n\theta + n \cos n-1\theta \cos \theta + \frac{n(n-1)}{1.2} \cos n-2\theta \cos^2 \theta + \dots + \cos n\theta.$$

5. Investigate the equation of a straight line in the form $\frac{x}{a} + \frac{y}{b} = 1$.

Appendix D. Draw the straight line $2x-3y=5$, and find the perpendicular on it from the origin, and the length of it intercepted between the axes.

*Seminal
Examinations.*

Also draw the loci of the following equations, $x(3y-2)=0$, $x^2-y^2=x-y$; and find the area of the four-sided figure which they form.

6. Investigate the loci of the equations $y^2=2ax-x^2$, $x^2=2by-y^2$, and find the equations of the tangents at the points where they intersect.

7. Find the equation of the tangent at any point of a parabola, and prove that tangents to a parabola at the extremities of a focal chord intersect on the directrix.

8. Find the locus of the middle points of a series of parallel chords of an ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$.

9. Prove the rules for differentiating $f(x) \times \phi(x)$, $f\{\phi(x)\}$, and differentiate $\cos x$; also find the differential coefficients of—

$$\sin^{-1}(2x\sqrt{1-x^2}), \log, \frac{\sqrt{1+x}-\sqrt{1-x}}{\sqrt{1+x}+\sqrt{1-x}}, (8x^2-21) \sqrt[3]{(7+4x^2)^2}.$$

10. Investigate the conditions for a maximum value of $\phi(x)$.

Find the maxima and minima values of $x^2\sqrt{4a^2-x^2}$.

If x and y be connected by the equation $x^4+y^4-2a^2xy=0$, for what values of x will x^2+y^2 be a maximum?

11. Define the subtangent and subnormal of a plane curve, and find expressions for their values. Find their values for the cissoid of Diocles, whose equation is $x^3=y^2(2a-x)$.

12. Define the curvature of a curve at a point, and find an expression for it in terms of the co-ordinates x and y of the point.

Transform the expression obtained to polar co-ordinates.

13. Integrate the functions—

$$\frac{1}{\sqrt{a^2-x^2}}, \frac{x}{(x^2+1)(x-1)^2}, \frac{\cos^2 \theta}{a^2 \cos^2 \theta + b^2 \sin^2 \theta}.$$

14. Find an expression for the volume of a surface of revolution.

The segment of a parabola cut off by the latus rectum is made to revolve about the latus rectum, find the volume of the surface generated.

LOGIC.

Examiner, Professor REID.

1. State and illustrate by examples the rules for division.
2. What are the uses of infinite nouns in Logic?
3. Define opposition and conversion. In what sense are they processes of inference?
4. What are the new classes of propositions introduced by Sir W. Hamilton, and what is the effect of their introduction upon conversion?
5. What is the meaning of the p at the end of Bramantip? Does it order an operation which is impracticable?
6. Why can the middle term never be distributed twice in the first or second figures?
7. Prove that an universal negative major premiss with any affirmative proposition as a minor premiss will give some conclusion in every figure.
8. Construct and reduce syllogisms in Dinaris and Fekero.
9. "If both premisses (in a conjunctive syllogism) be conjunctive the mood to be valid must be conformed to Barbara." Examine this statement.

10. Explain the structure of the Goclenian Sorites, and prove its *Appendix D.*
special rules.

11. What is "circumstantial evidence"? What are the logical *Sectional*
forms into which the separate arguments may be thrown? Which *Examinations.*
do you prefer?

12. Mention and give examples of the various forms of the fallacy of *Petitio Principii.*

THIRD YEAR.

GREEK.

Examiner, Professor BOULGER.

Translate:—

Πολλά δὲ καὶ ἄλλα ἔχοντες ἐκ τῆς ἀπείρας τοῦ περιεσθαι, ἣν ἰσχυρὰ ἀρχὴν τε μὴ ἐκπεσθαι ἅμα πολιορκούντες καὶ κινδύνους αἰσθημένους μὴ προσκινῆσθαι· μάλλον γὰρ περὶβῆναι τὰς οἰκίας ἡμῶν ἀμαρτίας ἢ τὰς τῶν ἐναντίων διασώσας. Ἄλλ' ἡμεῖς μὲν καὶ ἐν ἄλλῃ λέγειν ἅμα τοῖς ἔργοις δηλωθήσεται· οὐκ οὐδὲ τούτοις ἀπεκρίναμεν ἀποτιμῶμεν, μεγαλείας μὲν ὅτι ἴσασιν ἀγορᾷ καὶ λιμῇσι χρῆσθαι, ἣν καὶ λακταίμενοις ἐνηλασίας μὴ παύσει μήτε ἡμῶν μήτε τῶν ἡμετέρων ἐνερμάτων (οἷτοι γὰρ ἡμεῖς καὶ οἱ ἐν ταῖς ἐποδαῖς οἷτοι), τὰς τε πόλεις ὅτι ἀσυνόμας ἀφίσταμεν, εἰ καὶ ἀσυνόμας ἔχοντες ἰσχυροτάτους καὶ ὅταν κείνοις ταῖς αἰτίαις ἀποδῶσι πόλιν μὴ σφίσι ταῖς λακταίμενοις ἐπιτηδείας ἀποσυνάμειναι, ἀλλὰ αὐτοῖς ἰσχυρὰς ὡς βαδίζοντες· δίκαιον δὲ ὅτι ἰσχυροὶ δοῖναι κατὰ τὰς ἐπιτήδεις, πόλιν δὲ οὐκ ἀρξομεν, ἀρχαίμενοι δὲ ἀμυνόμεθα. ταῦτα γὰρ δίκαια καὶ πρέποντα ἅμα τῇδε τῇ πόλει ἀπεκρίνασθαι ἴδμεν· εἰ γὰρ ὅτι ἀνάγκη πολέμῳ ἣν ἐκαστοὶ μάλλον ἐρχόμεθα, ἥσαν. ἰσχυροτάτους τοὺς ἐναντίους ἔχομεν· ἔτι τε τῶν μεγίστων κινδύνων ὅτι καὶ πόλιν καὶ ἑαυτὴν μέγισται τιμὰι περιγίγνεται. εἰ γὰρ παύσαιτο ἡμῶν ὑποστάσεις Μήδους καὶ οὐκ ἀπὸ τοσούτου ἀρμύμενοι, ἀλλὰ καὶ τὰ ὑπάρχοντα ἐκλείνομεν, γνώμῃ τε πλείονι ἢ νύκτι καὶ ἄλλῃ μὲν ὅτι θανάμει τὸν τε βάρβαρον ἀπέσταντο καὶ ἐκ τῶν προηγουμένων αὐτὰ· ὅν οὐ γὰρ λείπεσθαι, ἀλλὰ τοὺς τε ἑαυτοῖς παντὶ τρόπῳ ἀμύνεσθαι καὶ τοὺς ἐπιγινώσκοντας παρῶσθαι αὐτὰ μὴ ἰλάσσω παραδόντας.

THUCYDIDES.

καὶ τὸ μὲν πρὸς τοὺς Ἀθηναίους τοσούτον ἀγαθὸν εὖ βουλευομένοις ἐρίσκεται· τὴν δὲ ὑπὸ πάντων ὁμολογουμένην ἔρασαν εἶναι εἰρήνην πῶς οὐ γὰρ καὶ ἐν ἡμῖν αὐτοῖς ποιήσασθαι; ἢ δοκεῖται, εἰ γὰρ τε ἴσιν ἀγαθὸν ἢ εἰ τῷ τὰ ἑαυτῶν, οὐκ ἡσυχία μάλλον ἢ πόλεμος τὸ μὲν πάσαις δὲ καὶ ἑαυτοῖς, τὸ δὲ ἐνέτιμασθαι, καὶ τὰς τιμὰς καὶ λαμπρότητας ἀπὸ ἐννοίας ἔχοντες τὴν εἰρήνην, ἀλλὰ τε ὅσα ἐν μήκει λόγων ἐν τις εἶλθαι δοκῇ περὶ τοῦ πολέμου; εἰ γὰρ σκεψαμένοις μὴ τοὺς ἑαυτοῖς λόγους ἐπιτίθεν, τὴν δὲ αὐτῶν τινα σωτηρίαν μάλλον ἀπ' αὐτῶν προΐδμεν. καὶ εἰ τις βεβαίως τε ἢ γὰρ δικαίως ἢ βίῃ πράττειν οἴεται, γὰρ παρ' ἑαυτοῦ μὴ χαλεπὸς σφαλλέσθω, γινώσκῃ ὅτι πλείους ἦσιν, καὶ τιμωρίας μισθόντες τοὺς ἀδικούντας καὶ ἐκπείσαντες ἑαυτοῖς δυνάμει τὴν πλεονεκτήσιν, οἱ μὲν οὐκ ὅσον οὐκ ἠρόντα ἀλλ' οὐδ' ἐκώσθησαν, τοὺς δ' ἀπὸ τοῦ πλείονος ἔχοντες προσκαταλείπειν τὰ αὐτῶν ἐννοίῃ. τιμωρία γὰρ οὐκ ἐόντος δικαίως, ὅτι καὶ ἀδικεῖται. οἱ δὲ ἰσχυροὶ βίβαντες, εὐνοίᾳ καὶ εὐνοίᾳ. τὸ δὲ ἀσυνόμας τοῦ μύλλοντος ὡς ἐπὶ πλείονος κρατῇ, πάντων τε σφαλερότατον δὲ ἔμωρ καὶ χρησιμώτατον φαίνεται ἐξ ἴσου γὰρ ἀδικίας προκρίβει μάλλον ἐπ' ἀλλήλους ἐρχόμεθα.

THUCYDIDES.

1. Draw up an epitome of the events recorded by Thucydides in the Fourth Book of his History.

2. Write a short essay on the style of Thucydides.

Appendix D.

Sessional
Examina-
tions.

LATIN.

Examiner, Professor LEWIS.

Translate:—

CICERO—*Pro Sestio*, viii.

Alter unguentis adfluens, calamistrata coma, despiciens consuec scup-
rorum, ac veteres vexatores aetatae suae, puteali et feneratorum gregibus
inflatus, a quibus compulsus olim, ne in Scyllaeo illo aeris alieni tan-
quam in freto ad columnam adhaeresceret, in tribunatus portum perfugerat,
contemnebat equites Romanos, minitabatur senatui, venditabat se operis
atque ab iis se ereptum, ne de ambitu causam diceret, praedicabat,
ab iisdemque se etiam invito senatu provinciam sperare dicebat:
eamque nisi adeptus esset, se incolamem nullo modo fore arbitrabatur.
Alter, o di boni! quam tacet incedebat! quam terribilis aspectu!—
unum aliquem te ex barbatis illis, exemplum imperii veteris, imaginem
antiquitatis, columnem rei publicae diceres intueri:—vestitus aspera
nostra hac purpura plebeia ac paene fusca: capillo ita horrido, ut Capua,
in qua ipse tum imaginis ornandae causa diuiviratum gerebat, Sep-
lasiam sublatus videretur. Nam quid ego de supercilio dicam, quod
tum hominibus non supercilium, sed pignus rei publicae videbatur?
Tanta erat gravitas in oculo, tanta contractio frontis, ut illo supercilio
annus illo niti tanquam videretur. Erat hic omnium sermo:
Est tamen rei publicae magnum firmitaque subsidium: habeo quem
opponam labi illi atque coeno: vultu, medius fidius, collegae sui libili-
nem levitatemque franget: habebit senatus in hunc annum quem
sequatur: non deerit auctor et dux bonis.

PLAUTUS—*Captivi*, Act I, Sc. i., 20.

Et hic quidem hercle, nisi qui colaphos perpeti
Potis parasitus frangique aulas in caput,
Vel extra portam trigeminam ad sacrum illicet.
Quod mihi ne eveniat non nullum est periculum
Nam postquam meus est rex potitus hostium,
(Ita [enim] belligerant nunc Aetoli cum Aleis:
Nam Aetolia haec est: illis captus in Alide
Philopolemas hujus Hagonis filius
Senis qui hic habitat: quae aedes lamentariae
Mihl sunt, quas quotiensquomque conspicio, fleo
Nunc hic coepit quaestum hunc fili gratia
Inhonestum, maxime alienum ingenio suo:
Homines captivos commercatur, si queat
Aliquem invenire, suum qui mutet filium.
Quod quidem ego nimis quam cupio [senex] ut impetret:
Nam si illam recipit, nihil est quo me recipiam.
Nulla inventatis spes est: sese omnes amant.
Ille demum antiquis est adolescens moribus,
Quoins numquam voltum tranquillavi gratia
Condigne pater est ejus moratus moribus.
Nunc ad eum pergam. Set aperitur ostium,
Unde sataritate saepe ego exivi ebrius.

1. Relate the plot of the *Captivi*.
2. Quote the passages in which Plautus is mentioned by Horace.
3. What is known concerning the life of Plautus?

4. How did the Roman differ from the Greek theatre in construction? *Appendix D.*
5. Explain the terms *municipium*, *colonia*, and *prefectura*.
6. Show that the date of the oration *Pro Sestio* can be determined approximately from internal evidence. Sessional Examinations.
7. Give an account of the history and antiquities of Capua.
8. Describe some of the most remarkable mosaics that have been discovered in England, France, and Italy.

[See also Papers of the Second Year, p. 96.]

ENGLISH LITERATURE.

Examiner, Professor ARMSTRONG.

1. Explain the differences apparent between the versification of Shakspeare's earlier and that of his later plays.
2. Analyse Shakspeare's conception of the Witches, and explain the nature of their influence upon the character and actions of Macbeth.
3. Give the argument of the Second Book of *Paradise Lost*.
4. Give a brief account of Dryden and his works.
5. Give an abstract of the Third Epistle of Pope's *Essay on Man*.
6. Name the principal English historians from the accession of Elizabeth to the present day.
7. Write a brief history of the English drama from the death of Shirley to the end of the 18th century.
8. Write sketches of Cowper and Burns.
9. What was the origin of the *Lyrical Ballads*? What was Coleridge's, and what was Wordsworth's aim in contributing to them?
10. What are the main principles of the philosophy which Wordsworth embodies in his poems?
11. Summarize Byron's reflections suggested by the Italian wanderings in *Childe Harold*.

MODERN HISTORY.

Examiner, Professor ARMSTRONG.

1. Write a brief account of the Main and Bye Plots.
2. What is the difference between an Impeachment and a Bill of Attainder?
3. Name in their order the battles of the Civil War.
4. Write a concise narrative of the events of Irish History from the appointment of Strafford as Deputy to the death of Cromwell.
5. Give the substance of the Act of Uniformity, the Conventicle Acts, the Test Act, and the Parliamentary Test Act.
6. Describe the foreign relations of England during the reign of Charles II.
7. Give the principal articles of the Bill of Rights.
8. What was the origin of the Mutiny Bill?
9. What was the part taken by England in the War of the Spanish Succession?
10. What are the reasons assigned by Burke for the dissatisfaction of the public mind in 1770?
11. What were the terms of the Scottish and Irish Unions respectively?

Appendix

Seminal
Examina-
tions.

MATHEMATICS.

Examiner, Professor NIVEN.

1. Find the cosine of the angle between two straight lines whose direction cosines are given. When the equations of the lines are given, what does the expression for the cosine become?

Find the length and the equation of the perpendicular from the point $(a \ b \ c)$ upon the straight line $ax - by + a^2 - b^2 = 0$, $by - cz + b^2 - c^2 = 0$.

2. Find an expression for the volume of a tetrahedron, one of whose angular points is at the origin.

The opposite sides of a tetrahedron are a , b , the shortest distance between them is c , and the angle between them is α ; prove that the

volume of the tetrahedron $= \frac{1}{6}abc \sin \alpha$.

3. Find the equation of the plane which contains the two lines $x = \alpha z + \alpha$ $\left\{ \begin{array}{l} x = \alpha z + \gamma \\ y = \beta z + \beta \end{array} \right\}$, $y = \beta z + \beta$ $\left\{ \begin{array}{l} x = \alpha z + \gamma \\ y = \beta z + \beta \end{array} \right\}$, determining the condition that the problem may be capable of solution.

4. Find the generating lines through any point of the surface $\frac{x^2}{a^2} + \frac{y^2}{b^2} - \frac{z^2}{c^2} = 1$, and prove that two generators of opposite systems intersect, but that two generators of the same system do not intersect.

5. Find, by Joachimsthal's method, the equations of the tangent cone and polar plane of any point, with respect to an ellipsoid.

If the polar plane of the point (hkl) , with regard to the ellipsoid $\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1$, envelop the sphere $(x - a')^2 + (y - b')^2 + (z - c')^2 = R^2$, prove that (hkl) lies on the surface

$$\left(\frac{a'h}{a^2} + \frac{b'l}{b^2} + \frac{c'l}{c^2} - 1 \right)^2 = R^2 \left(\frac{h^2}{a^4} + \frac{l^2}{b^4} + \frac{l^2}{c^4} \right).$$

6. Find the directions and magnitudes of the axes of the surface $Ax^2 + By^2 + Cz^2 + 2Dyz + 2Exz + 2Fxy = 1$. When will the surface be one of revolution?

7. Define, and find the curvature of a tortuous curve at any point. Find also the direction cosines of the principal normal at any point.

The equations of a curve are

$$x = a \sin \alpha \cos \theta e^{\theta}, \quad y = a \sin \alpha \sin \theta e^{\theta}, \quad z = a \cos \alpha e^{\theta},$$

show that it cuts the radius vector at a constant angle, and find the length between any two points, and the curvature at any point.

8. State and prove Euler's Theorem regarding the curvature of surfaces.

If ρ and σ be the two principal radii of curvature at any point of an ovoid ellipsoid of revolution, whose semi-axes are a , b , b ; prove that $\rho : \sigma^3 = a^2 : b^4$.

9. Investigate the solution of the differential equation

$$\frac{dy}{dx} + f(x)y = \phi(x)y^a.$$

Solve the equations—

$$\sqrt{1+x^2} \frac{dy}{dx} + ny = a\sqrt{1+x^2}$$

$$y^2 dy + (3y^2 x + 2x^2) dx = 0.$$

$$(3x - 2y + 1) dx + (2x + y - 2) dy = 0.$$

10. State the general theory of the solution of equations by means of *Appendix D.*
the "Variation of Parameters."

Apply it to solve the equation

$$\frac{d^3y}{dx^3} - 3\frac{dy}{dx} + 2y = xe^x.$$

Sessional
Examina-
tions.

11. Prove the theorem—

$$\phi\left(\frac{d}{dx}\right)e^{ax} \cdot \psi(x) = e^{ax}\phi\left(\frac{d}{dx} + a\right) \cdot \psi(x).$$

Solve the equation—

$$\frac{d^3y}{dx^3} + a^3y = x \sin ax + \cos bx.$$

12. Find the curve in which the radius of curvature is equal, and opposite in sign, to the normal.

13. Investigate the theory of the solution of the equation
 $P\frac{dz}{dx} + Q\frac{dz}{dy} = R$; P, Q, R being known functions of x, y, z ; and discuss
the geometrical signification of the results obtained.

Solve the equations—

$$(bx - cy)\frac{dz}{dx} + (cx - az)\frac{dz}{dy} = ay - bz.$$

$$x(y^2 - z^2)\frac{dz}{dx} + y(z^2 - x^2)\frac{dz}{dy} = z(x^2 - y^2).$$

14. Solve the equations—

$$\frac{d^2x}{dt^2} - 2a\frac{dy}{dt} + c^2x = \cos at$$

$$\frac{d^2y}{dt^2} + 2a\frac{dx}{dt} + c^2y = 0.$$

CHEMISTRY.

Examiner, Professor SIMPSON.

PASS PAPER.

1. What quantity of pure common salt is required for the precipitation of 200 grains of pure nitrate of silver?

(Atomic weights: sodium = 23, Silver = 108.)

2. What gas is formed when carbon dioxide is passed over red hot charcoal? State what you know about this gas, and how it may be distinguished from hydrogen gas. Give another process for its preparation.

3. How is hydrochloric acid gas prepared? How would you determine its composition by volume synthetically? Explain by equations the action of its solution in water upon the following bodies:—(a) mercuric oxide; (b) teroxide of antimony; (c) manganese dioxide.

4. What gas is evolved when heat is applied to a mixture of chloride of ammonium and quick lime? Give the most characteristic properties of this gas, and state how its composition by volume may be determined by means of the eudiometer.

5. What gas is given off when water is exposed to the simultaneous action of iodine and phosphorus? A solution of this gas in water may be prepared in another way—describe it.

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 —
 Semioal
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 tions.

6. What gas is evolved when chlorine gas is passed into a solution of ammonia? Give another process for this gas, and state what you know about its properties.

7. How would you prove that nitric acid is a monobasic and sulphuric acid a dibasic acid?

8. Enumerate all the natural and artificial varieties of carbon, and give their most important properties and applications.

9. You are given metallic mercury, sulphuric acid, and common salt. How would you proceed to form corrosive sublimate and calomel from these bodies? Give equations.

10. You are given ferrous sulphate, oil of vitriol, nitric acid, and ammonia. Describe and explain how you would prepare magnetic oxide from these materials.

11. Give a short account of the metallurgy of silver and lead.

12. Explain by equations the action of sulphuretted hydrogen upon acidulated solutions of arsenious acid, sulphate of cadmium, and ferric chloride respectively. How may the precipitates formed in the first two solutions be distinguished by a single test?

13. What is meant by the term atomicity or quantivalence? Give the atomicity of the following bodies: Nitrogen, oxygen, phosphorus, arsenic, cyanogen, acetylene (C_2H_2), marsh gas, olefiant gas, ethyl (C_2H_5), allyl (C_3H_5).

14. Explain by equations the action of hydriodic acid upon alcohol and olefiant gas respectively.

15. Write the constitutional formulae of alcohol, glycol, and glycerine. Name and write the formulae of the acids that may be formed from the first two by the action of oxidizing agents. Explain all the reactions by equations.

N.B.—This Paper was common to Students in Arts of the Third Year, and to First Year's Students in Engineering and Medicine.

NATURAL HISTORY.

Examiner, Professor HARNES.

N.B.—The Papers on Zoology and Botany were common to Third Year's Students in Arts and First Year's Students in Medicine.

ZOOLOGY.

1. By what means are the *Endoplastica* distinguished from the *Monera*?

2. Into what orders is the class *Echinodermata* divided?

3. Describe the characters of the class *Insecta*.

4. What is the modern representative of the order *Tetrabranchiata*?

5. What snakes possess representatives of hind limbs?

6. What is the position of the mammary glands in *Didelphia*?

7. By what means are flexibility and elasticity given to the spinal column of *Cetacea*?

BOTANY.

8. Describe the elements which form the *Pistil* in its most perfect condition.

9. In what respects do *Monocotyledons* differ from *Dicotyledons*?

10. What is the structure of the flower in the suborder *Papilionaceae*?

11. What genera of *Ranunculaceae* want petals?

GEOLOGY AND MINERALOGY.

Appendix D

N.B.—The following paper was common to Third Year's Students in Arts and First Year's Students in Engineering.

Sessional
Examinations.

1. Mention areas of land which are at present undergoing changes of level; and indicate the evidences of these changes.
2. What are the several materials which enter into the composition of Volcanic cones?
3. By what means are Plutonic rocks distinguished from Volcanic and Aqueous rocks?
4. What is the nature of the rocks known as Breccias?
5. Where, and under what conditions, do the Cambrian rocks occur in the British Isles?
6. In what horizon have the earliest traces of fishes been found in the British Isles? To what group of fishes do these appertain?
7. What is the origin of Coal? What circumstances connected with coal afford evidences of its nature?
8. Where in Ireland are Triassic rocks represented; and under what form do they occur?
9. Mention the locality in England where the Neocomian deposits are best represented; and indicate the nature of these deposits?
10. What is the position of the Nummulitic limestone? What group of fossils occurs most abundantly therein?
11. To what family of minerals does Amethyst appertain; and to what does it owe its colour?
12. What form of Felspar is most common in ordinary Granite?

School of Engineering.

SCHOLARSHIP EXAMINATIONS.—FIRST YEAR.

Scholarship
Examinations.

(See papers for First Year's Science Scholarship Examination in the Faculty of Arts, p. 80).

SECOND YEAR.

(See papers: 1, in *Mathematics*, Science Scholarship Examination of Second and Third Year, in the Faculty of Arts, p. 82; 2, in *French*, Literary Scholarship Examination of the Second and Third Years, in the Faculty of Arts, p. 79; 3, in *Chemistry*, the paper was the same as that for the Scholarship Examination of the Second Year in the Faculty of Medicine, see p. 118).

GEOMETRICAL DRAWING.

Examiner, Professor JACK.

1. Find the traces of a plane passing through a given point and line.
2. Given the horizontal trace of a cone, and the projection of its vertex, also the vertical projection of a point on its surface; find the other projection.
3. Also find the traces of a plane touching the cone at the point.
- 4 and 5. A pyramid is constructed of equilateral triangles, and stands

Appendix D.
Scholarship
Examinations.

on a plane having a given rise, the side of the base of the pyramid next the trace of the plane makes a given angle with the trace of the plane, and the point of intersection is given, find the projection of the pyramid.

6. Find the shadow it would cast on the plane on which it stands, taking the trace of the plane parallel to the ground line.

7. Find the projection of the curve of intersection of a vertical circular cylinder and a sphere.

8. Find the projections of the curve of intersection of a vertical circular cylinder and a circular cone having its axes horizontal and parallel to the vertical plane of reference, and intersecting the axis of the cylinder.

9. Define a spiral, and give the method of drawing it, and of finding its projection on a plane through the axis of the cylinder.

10. Describe the Doric order of architecture.

THIRD YEAR.

SURVEYING, &c.

Examiner, Professor JACK.

1. Describe the method of making a closed traverse survey.

2. Describe the checks on the work, and the method of taking out the area.

3. Describe the planimeter and explain the principle of its construction.

4. What is meant by a level traversing? Explain fully the method of making the adjustment.

5. What is the position ordinarily given in books as that which the line of collimation in a Gravatt's level should occupy? Show that this is not necessary.

6. How would you find the local time from an observation not in the meridian.

7 and 8. Take out the quantities of the structure shown in the accompanying drawing.

9. Practical examination with the level.

10. Practical examination with the theodolite.

GEOLOGY AND MINERALOGY.

Examiner, Professor HARNES.

1. What is the nature of Trachyte? Describe its mineral composition.

2. Define "Schist," distinguishing it from shale and slate.

3. What is meant by the "throw" of a fault?

4. Where, and under what circumstances, are the Laurentian rocks supposed to be represented in the British Isles?

5. What are the rocks usually associated with coal seams?

6. Where have the Permian rocks been recognised in Ireland?

7. Name the divisions of the German Trias. Indicate their nature, and the fossils which they afford.

8. What is the position, and what are the characters of the "Faluns" of the west of France?

9. What is the composition of *Andalusite*? Under what circumstances does it usually occur?

10. To what family is onyx referable? Give its external characters.

SESSIONAL EXAMINATIONS—FIRST YEAR.

GEOMETRICAL DRAWING.

*Examiner, Professor JACK.**Appendix D.*Sessional
Examina-
tions.

1. Draw a perpendicular at the end of a line without producing it.
2. Give one of the methods of drawing the architectural moulding called a scotia.
3. State and prove the condition that two points may be the projections of a single point.
4. Given the projections of a line, find its traces. Give proof of construction.
5. Construct the angle between two lines whose projections are given.
6. Find the projections and real size of the section of a right circular cone, placed with its axis vertically, by a plane parallel to one side of the cone, and perpendicular to the vertical plane of reference.
7. Given the side of an equilateral triangle, 2 inches long, the trace of the plane in which the triangle lies, and the rise of the plane; also the point of intersection of the side of the triangle with the trace of the plane, the angle which that side makes with the trace, and the distance of the nearest angle of the triangle from the point of intersection; construct the horizontal projection of the triangle.
8. Explain the method of finding the isometric projection of a curve placed in one of the isometric planes.
9. Given the projection of a point, and the projection of the point of sight, and the trace of the picture plane, find the perspective of the point in the separate picture plane.
10. Explain the method of setting off heights, on a group of vertical lines, all placed in a vertical plane, whose trace is given.

SECOND YEAR.

SURVEYING AND LEVELLING.

Examiner, Professor JACK.

1. Describe the method of keeping a field book for a survey.
2. Describe the different methods that may be employed for taking out the acreage of the separate enclosures in a survey.
3. Explain the principle of the vernier, and describe the vernier of the 5-inch theodolite.
4. Explain the process of repeating an angle with the theodolite, and state what amount of accuracy can thus be obtained with a 5-inch theodolite.
5. What are the two methods according to which the angles of a traverse survey may be measured? State which you prefer, and the advantages that method has over the other.
6. A level is set up midway between two staffs A and B, 2 feet apart, and the readings are, on A 3.41, on B 6.05; the level is then moved to a point in line beyond and 15 feet from A, and the readings are, on A 4.55, on B 7.30; determine the correct readings and in which direction the cross wires should be moved.
7. In ordinary practice how many adjustments are there to be made in a Gravatt level? What are they and in what order should they be taken?

Appendix D.

Sectional
Examina-
tions.

8. Describe the method of setting out a curve with the chain and theodolite.

9. In the case of water flowing through a thin-lipped orifice, what is meant by the *vena contracta*?

10. If the values of y at the beginning and end of a curve and at an odd number of equidistant intermediate points be given, find an approximate value for the integral

$$\int_a^b f(y) dx.$$

a and b being the abscissæ of the beginning and end of the curve.

CIVIL ENGINEERING.

Examiner, Professor JACK.

1. Describe the different kinds of masonry.

2. In a timber truss of the form shown in the diagram, sketch the joint at A and B.

3. How does the result of the Bessemer process differ from the kinds of iron or steel ordinarily in use before that process was brought into operation.

4. When a structure has to be made of several parts joined together, what difference is there between the method of joining to be employed when the material is cast iron, and when it is malleable, viz. :—either boiler plate, bars, or angle iron, &c.?

5. Describe the hand tool used for boring holes in iron; also the machine tool for larger holes.

6. The abutment of a stone bridge is to be borne on a wooden pile foundation; what timber would you use; what size; how fitted; describe method of driving; how would you determine depth to which the piles should be driven?

7. What difficulty arises in constructing a cofferdam, where there is no change in the level of the water; how has this difficulty been overcome?

8. What is the use of a centre used in building a stone bridge? Describe the form you would use for an elliptic arch of 80 feet span, over a stream of which the water-way might be interfered with.

9. Describe the construction of a boiler-plate girder for a bridge carrying a single line of railway over a span of 60 feet.

10. In a cast iron arch bridge, how are the ends of the arches carried? What further connexion do the arches require beyond that implied in the construction of the roadway?

THIRD YEAR.

CIVIL ENGINEERING.

Examiner, Professor JACK.

1. What is the neutral axis of the cross section of a girder? How would you find its position?

2. A cast iron girder, 20 feet long, has to carry a load of half a ton to the foot; what depth would you give it, and what size to the top and bottom flanges?

3. How would you calculate the stresses on the girder in sketch?

4. Find the expression for the deflection of a girder of constant section, supported at the ends, and carrying a uniformly distributed load.

5. What is the difference in the strength of a *long* pillar according as its ends be *fixed* or *free*? Explain what you mean by a long pillar, and point out, as far as you can, a reason for the difference. Appendix D.
Sessional
Examinations.
6. If, in endeavouring to fix the end of a *short* pillar of rectangular cross-section, you caused the resultant of external forces to press down one side, find the stresses in any cross-section.
7. Describe the ordinary form of permanent way where the broad-footed rail is used. Assuming the gauge, give dimensions as far as you can.
8. Describe the arrangements and structure of the firebox and firebox shell in a locomotive.
9. Describe the construction of the double-seated valve used in a Cornish engine; also object of this construction.
10. What steps would you take to ascertain the amount of water that might be collected from a given catchment basin?

Faculty of Law.

SCHOLARSHIP EXAMINATIONS.—FIRST YEAR.

ENGLISH LAW.

Examiner, Professor O'SHAUGHNESSY.

Scholarship
Examinations.

REAL PROPERTY.

1. What are the distinctive terms used by lawyers to designate immoveable property? Explain the reason why each of the terms is used. Give the terms used as to moveable property.
2. What is the legal meaning of the word "premises"?
3. Explain when an estate tail may be, (a) general; (b) special; (c) tail male; (d) tail female.
4. What was the rule of descent expressed by the maxim *Seisina facit stipitem*? On this point what is now the state of the law?
5. A purchaser of land dies intestate leaving an only son and no other relations. On the death of the son intestate, how will the ownership of the lands be then traced? In such a case what would have happened before the Act 3 & 4 Wm. IV., c. 106?
6. To what kind of property and to what estates do the rules of descent exclusively apply?
7. Explain how the incident of the tenure of estates in fee-simple called the right of escheat comes into operation? What is now the most usual cause of it?
8. What is the word employed in modern conveyancing when it is intended to vest an estate in fee-simple in any person by force of the Statute of Uses?
9. What are executory interests, as to duration, as distinguished from contingent remainders? How may executory interests be now created?
10. What formalities are necessary in order to render valid the conveyance by a married woman of her estates? How would it be if it were done in exercise of a power of appointment?
11. Mention some kinds of incorporeal hereditaments appendant to such as are corporeal. Explain shortly what they are.
12. What was the period for which title was investigated on a sale of lands? State the reason why that period was required. What is the effect of the Vendor and Purchaser Act, 1874, upon the commencement of title which a purchaser may require?

SECOND YEAR.

ENGLISH LAW.

Examiner, Professor O'SHAUGHNESSY.

CONTRACTS—(SMITH).

1. A debtor had been taken in execution; in consideration that the creditor would discharge him out of custody, C promised to pay the debt; it was held that this promise need not be in writing. What was the reason for the decision?

What is the only test and criterion by which to determine whether the promise to answer for the debt of another need be in writing? (Stat. of Frauds, sec. 4.)

2. Upon an illegal contract money has been paid in part performance. Will an action lie to recover it back again? State the reasons for the answer.

3. What formality is required for a contract by a corporation? Explain the reason. Mention the principle of what are received as exceptions to the general rule.

4. What is the operation as relates to the subject of agency of the maxim *Delegatus non potest delegare*? Explain the reason for this exception to the general law of agency.

PERSONAL PROPERTY—(WILLIAMS).

5. What are chattels real? What are chattels personal? In case of purchase of the latter, how is a valid title to them obtained by the purchaser?

6. Explain the distinction between personal actions, (a) *ex delicto*, and (b) *ex contractu*.

How far is the maxim *Actio personatis moritur cum persona* of application?

7. What is the difference between a single bond and a bond with condition?

8. If a legacy be given to a person to be payable when he attains the age of twenty-one years, what becomes of the legacy if he should die under that age?

Give reasons for the answer.

If in a settlement the portion (with like provision) be charged on land, the family estate being entailed on the eldest son, what, on a like occurrence, would become of the portion?

EQUITY JURISPRUDENCE—(SMITH).

9. If a bill in equity be filed by a borrower to set aside an usurious transaction, what terms will the Court make obligatory on him? Would like terms be imposed if the lender had filed a bill to enforce his claim? What is the principle guiding the action of the Court in such cases?

10. What are the subjects of remedial equity specifically so termed? Define each as remediable in equity.

11. Define what are equitable assets.

12. In the case of mesne profits what circumstances will be considered as affording grounds for the interference of a Court of Equity?

SENIOR SCHOLARSHIPS.

ENGLISH LAW.

Examiner, Professor O'SHAUGHNESSY.

*Appendix D,
Scholarship
Examina-
tions.*

LAW OF VENDORS AND PURCHASERS OF REAL ESTATE.

1. What effect has a written agreement upon previous representations?
2. How are covenants entered into by purchasers classified?
3. How may the plaintiff's case in a suit for specific performance be sustained in the absence of a written agreement?

LAW OF LANDLORD AND TENANT.

4. What is the leading criterion whether the best rent has been got or not where a lease is made under a leasing power requiring that the best and most improved rent should be reserved without taking any fine or foregift? What is he who makes the lease bound to do as to getting the best rent?
5. What are the proper operative words in a lease of lands for years? What words should be used in a freehold lease? To what is the word "demise," taken strictly, confined?
6. What is necessary in order to support an action for use and occupation?

LAW OF EVIDENCE.

7. What is meant by the term "ancient documents"? On what principle are they allowed to be read against persons in no way privy to them, when tendered in support of ancient possession? Of what must they purport to have formed a part? What proof should be given in support of their genuineness?
8. What are the presumptions with respect to the ownership of property in the following cases:—The soil of unnavigable rivers; navigable rivers and arms of the sea; land lying on the sea-shore; part of the shore overflowed only at spring-tide; waste land on the sides of a highway?
9. With what qualification will evidence of usage be admitted to explain a written contract or other instrument? State the reason. On what presumption does the rule of annexing incidents by parol in explanation rest?

COMMON LAW PLEADING.

10. By what considerations ought a pleader be governed in determining whether to demur or to plead?
11. Mention the three particulars which may be said to be the chief objects of the present system of pleading.
12. In stating an instrument or other matter in pleading how should it be set forth? Give the reason.
- If a joint-tenant conveys to his companion by the word "grants" his estate in the lands holden in jointure, how should it be pleaded?

CIVIL INJURIES—CRIMES.

13. In what respect, as regards the record, do the grounds on which a new trial may be moved for, differ from those on which arrests of judgment arise?
14. Define conspiracy. When may the misdemeanor become merged in a felony?
15. Distinguish the two species of contempts which are punishable by attachment. With what intention is this process issued? What may ensue on the intention of its having been issued being fulfilled?

Appendix D.

Sessional
Examina-
tions.

SESSIONAL EXAMINATIONS.—FIRST YEAR.

ENGLISH LAW.

Examiner, Professor O'SHAUGHNESSY.

REAL PROPERTY.

1. An estate is given to the tenant for life by a written instrument expressly declaring his estate to be without impeachment of waste; state what acts of waste he may commit with impunity, and the extent to which he is forbidden to carry them?

2. Is an estate tail an estate of freehold? Give the reason for the answer.

3. What is the longest period for which lands can be tied up, or fixed, as to their future destination?

4. State as to each of the following, whether they can hold lands, and whether they can make binding conveyances of them:—

(a) Infants.

(b) Idiots.

(c) Lunatics.

How may action in respect to their estates be assisted?

5. State the four unities of joint-tenancy?

6. What can a joint-tenant, or a tenant in common, do to turn his interest into a tenancy in severalty?

7. At the end of a Deed are the words "In witness, &c."—set out in full the words which should follow "In witness."

8. Why are there no stops in Deeds?

9. If an interlineation or other alteration be made in a Will after its execution, will it have any effect?

10. What are the two kinds of estates which may be granted, to commence in interest and not in possession merely, at a future time? How must each be created?

11. What is the legal relation which subsists between trustees who are seized of lands, and their *cestui que trust* when in possession of those lands?

12. Mention the state of the law, and the periods fixed by the Prescription Act (2 and 3 William IV., c. 71), user within which cannot be defeated, as to

(a) Rights of common.

(b) Rights of way.

(c) Access and use of light.

SECOND YEAR.

ENGLISH LAW.

Examiner, Professor O'SHAUGHNESSY.

PERSONAL PROPERTY—(WILLIAMS).

1. Define Bailment.

Explain when a lien may be particular, and when it may be general.

2. What provisions with respect to policies of life assurance are contained in the Married Women's Property Act of 1870?

3. If an Award be made for the payment of money, what effect has it as between the parties? If the Award be made a Rule of Court what course may be taken on it?

4. What is requisite to make a will of personal estate valid?

CONTRACTS—(SMITH).

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Sessional
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tions.

5. Explain the distinction, as between Contracts by Deed and Simple Contracts, which is taken as to what, in each, is requisite to give validity. Give the reason for the distinction. What does the law presume as to the first?

6. Under what three heads are the cases reducible which have been decided on the ground of public policy as being instances of a condition against law?

7. Explain the nature of the deceit, whether active or passive, by which a contract may be avoided on the ground of fraud.

8. If the seller of goods know at the time of making the contract of sale that the buyer, although dealing with him in his own name, is in reality the agent of another, what course of action on his (seller's) part would enable him to recover from that principal? and what would have the effect of rendering the principal not liable?

State the principle involved.

EQUITY JURISPRUDENCE—(SNELL).

9. State what distinguishes a constructive trust both from express and implied trusts. Define the latter.

10. Explain the doctrine of notice in respect to the purchase of an estate.

11. When generally will equity relieve against a penalty? How may it relieve? Why will it not permit the party bound by the agreement to avoid that agreement by paying the stipulated penalty?

12. In what ways may a married woman validly dispose of property out of which she would otherwise be entitled to claim her equity to a settlement, so as to preclude herself from afterwards claiming that equity? Give the answer as to (a) interests in realty, (b) interests in personality.

Faculty of Medicine.

Scholarship
Examina-
tions.

SCHOLARSHIP EXAMINATIONS—FIRST YEAR.

(See Papers for Literary and Science Scholarship Examinations in the Faculty of Arts, pp. 72 and 80.)

SECOND YEAR.

(For the Paper in French see Literary Scholarship of the Second and Third Years, p. 79.)

NATURAL PHILOSOPHY.

Examiner, Professor ENGLAND.

1. Reduce—24° Cent. to Fahrenheit scale.

2. What do you understand by the obscure rays of the spectrum? How is their existence shown?

3. What is the characteristic property which distinguishes the spectrum of a gas from that of a solid body?

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Examinations.

4. The focal length of a convex lens being 20 inches, what will be the nature and position of the image of an object when placed at 5 inches from the lens?
5. Find the distance of an obstacle which sends back the echo of a sound to the source in 2 seconds when the velocity of sound is 1,100 feet per second.
6. Describe the method of observing temperatures by the weight thermometer.
7. What effects can be produced by passing an electric current—
 - (1) Through water?
 - (2) Through a copper wire?
 - (3) Through a fine iron wire?
8. What is meant by the magnetic axis of a magnetic bar? How is its position determined?
9. What is the volume of a solid which weighs 700 grains in air and 450 in water, the volume of a cubic inch of water being 252 grains?
10. The lever handle of a screw is 18 inches and the thread makes four turns in an inch: what is its mechanical advantage?
11. Define "acceleration." What is the acceleration produced by a pressure of 2 lbs. acting for 5 seconds on the quantity of matter contained in 12 lbs.?
12. Explain the principle on which the pendulum is applied to regulate time.

CHEMISTRY.

Examiner, Professor SIMPSON.

N.B.—This Paper was also given to candidates for Engineering Scholarships of the Second Year.

1. If all the chlorine that may be obtained from 100 grains of manganese dioxide and excess of hydrochloric acid is passed into a solution of iodide of potassium, what quantity of iodine will be set free? (Atomic weights, Manganese=55; Iodine=127.)
2. How may oxygen and nitrogen gases be obtained in a separate state from atmospheric air? Enumerate the most characteristic properties of these gases.
3. How did Graham determine the rate of diffusion of different gases? What relation did he observe to exist between the rate of diffusion and the specific gravity of a gas? Explain the use of this law in the economy of nature.
4. How are nitrogen dioxide and sulphur dioxide prepared? Enumerate the most characteristic properties of these gases, and give their composition by weight and volume. Write the reactions in symbols.
5. What gas is evolved when hot hydrochloric acid is brought into contact with sulphide of antimony? Mention its most characteristic properties, and explain how it behaves when brought into contact with the following bodies:—(a) chlorine; (b) acid solution of sulphate of copper; (c) acid solution of corrosive sublimate; (d) acid solution of ferric chloride; (e) air. Give equations.
6. What is the chemical constitution of soap; and what is the action of hard water upon it?
7. Enumerate all the natural and artificial varieties of carbon. Mention their most important properties.
8. How are the two chlorides of mercury prepared? Explain the action of ammonia, and potash upon each respectively. Give equations.

9. Describe the process for the manufacture of carbonate of soda from *Appendix D.*
common salt. Explain all the reactions by equations.

10. Describe and explain the process of dialysis. What are "colloids" and "crystalloids"? Give examples. *Scholarship Examination.*

11. Give a short explanation of the following terms:—Isomerism, allotropism, polymerism, homologous series. Illustrate by examples.

12. Explain the binary theory of acids and salts. What experiments suggested this theory to Sir H. Davy?

13. If ethyl-alcohol boils at 78° Cent., at what temperature ought normal propyl alcohol to boil according to Kopp's law?

14. Give two general methods for the preparation of monobasic organic acids. Explain the preparation of acetic acid by both these methods. Give all reactions in symbols.

15. Write the constitutional formulæ of alcohol, glycol, and glycerine. How many classes of haloid and oxygen acid ethers may be obtained from each of these alcohols? Write the constitutional formulæ of all the hydrochloric ethers that may be obtained from them.

16. How are marsh gas and olefiant gas prepared?

Explain the action of chlorine upon each. Give equations.

BOTANY AND ZOOLOGY.

Examiner, Professor HARKNESS.

1. To what portion of the floral envelope does the vexillum appertain? In what group of plants does it occur?

2. What is the nature of an achene?

3. To what order of plants does the *arbutus* belong?

4. What are the groups which make up the *Molluscoidea*?

5. Indicate the characters of *pseudopodia*. To what invertebrate group do they appertain?

6. What is the character of the dentition in crocodilia?

PRACTICAL ANATOMY.

Examiner, Professor CHARLES, M.D.

1. Give a concise account of the characteristic marks of the peculiar cervical, dorsal, and lumbar vertebrae. With what bones do the os magnum and external cuneiform respectively articulate?

2. Describe carefully all the ligaments attached to the seventh rib.

3. Give a careful description of the method and the order you would adopt so as to make a complete dissection of the heart. Describe concisely the interior of the left ventricle.

4. Describe fully the different coats of (1) the duodenum, and (2) the transverse colon.

5. Give the attachments, relations, and actions of the external oblique and triangularis sterni muscles.

6 and 7. Oral examination on bones and specimens.

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Scholarship
Examinations.

THIRD YEAR.

ANATOMY AND PHYSIOLOGY.

Examiner, Professor CHARLES, M.D.

1. Give an account of the structure and properties of arteries, and state what influence they exercise on the circulation.

2. Enumerate the stimuli that affect—

- (1) muscle as well as nerve ;
- (2) nerve alone ;
- (3) muscle alone.

3. Describe carefully animal pigment, its microscopical characters, chemical composition, and uses. State also where it is found in the human body.

4. Enumerate the "albuminoid bodies" and describe some of the more important characters of each of them.

5. Describe the microscopical characters of the spleen. What is its function? Support your statement by proofs.

6. What are the sources of animal heat? How is the temperature in warm-blooded animals maintained nearly constant?

7. Name the specimens under the microscopes 1-8, and the moist preparations 1-5.

8. Oral examination on microscopical specimens, physiological apparatus, &c.

MATERIA MEDICA.

Examiner, Professor O'KEEFE.

1. When are diuretics indicated and contra-indicated? Name the principal medicines of this class, and write a prescription for a diuretic mixture, with directions for its use.

2. How do anthelmintics act? Mention some of the principal remedies employed in the treatment of tapeworm. Illustrate the method of using them by a prescription.

3. Contrast the therapeutic properties of calomel and corrosive sublimate. Illustrate the exhibition of each by a prescription.

4. Cannabis Indica. Give its physiological and therapeutic actions—pharmacopoeial preparation—a prescription for its exhibition.

5. What are the pharmacopoeial preparations of cantharides? When are they indicated, and how used?

6. What are the pharmacopoeial preparations of the following:—*Acidum Hydrocyanicum dilutum*; *Bismuth*; *Ferrum*; *Chloral Hydrate*; *Arsenic*? Select any one. Give its physiological and therapeutic action, with a prescription for its exhibition.

7. Name the drugs placed before you, marked 1 to 8. State briefly the therapeutic action of each.

FOURTH YEAR.

ANATOMY AND PHYSIOLOGY.

Examiner, Professor CHARLES, M.D.

1. Classify the "albuminous bodies." Give some of the more important characters of each substance you name.

2. Mention the points or lines on the surface of the body which indicate the position of the edges, sulci, cavities, and orifices of the heart.

3. Describe the microscopical characters of (1) the suprarenal capsule, (2) the red marrow, and (3) the pituitary body. State also in a concise manner what is known as to the function of each.

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tions.

4. Give a careful description of the development of blood-vessels and of blood corpuscles.

5. Describe minutely the course and arrangement of the fibres of the cerebrum. What are Foville's views?

6. Describe in detail the functions of (1) the vagus nerve, and (2) the cervical portion of the sympathetic cord.

7. Name the specimens under the microscopes 1-8, and the moist preparations 1-5.

8. Oral examination on microscopical specimens, physiological apparatus, &c.

PRACTICAL ANATOMY.

Examiner, Professor CHARLES, M.D.

1. Give a full account of the lymphatics of the abdomen (both parietes and contents).

2. Write a short essay on the abnormalities of the arteries of the upper extremity.

3. Give an account of the posterior primary branches of the cervical and sacral nerves, and describe the method by which you would expose them respectively.

4. Describe the different steps of the dissection by which you would fully display Meckel's and the otic ganglion, also the cardiac and hypogastric plexuses respectively.

5. Give a concise description of (1) the valve of Vieussens, (2) the fornix, and (3) the principal fissures of the brain and spinal cord.

6 and 7. Oral examination on bones (their ossification, &c.), and the brain.

SURGERY.

Examiner, Professor TANNER.

1. Differentiate between cancer of the breast and adenocoele, giving the distinctive characters of each, and describe their respective microscopical differences.

2. Describe, in their order of frequency, the several growths which affect the testis, and mention the signs on which you would chiefly rely in the diagnosis of each.

3. Enumerate the leading distinctive pathological differences between the principal varieties of caries, viz.: simplex, fungosa, and syphilitica. Give also the signs which would enable you to diagnose each; and sketch briefly the affection known as Caries sicca, telling which joint it principally affects, and by whom it has been described.

4. What operations have been proposed for excision of the ankle joint, and who devised them? Give your reasons for selecting excision or amputation in a case of injury to, or disease of said joint.

5. Give a brief tabular statement of the various kinds of Polypi nasi, telling their places of attachment, anatomical and pathological differences, symptoms and appropriate treatment.

PRACTICE OF MEDICINE (PATHOLOGY).

Examiner, Professor O'CONNOR.

1. What are the sources of blood poisoning in the beginning and during the progress of Typhus Fever?
2. Give instances of diseases not ordinarily contagious, becoming so under peculiar circumstances.
3. Describe the effects of syphilis on different organs of the body.
4. Describe the process of inflammation in its various stages.
5. Explain how organic and functional diseases of the brain are produced by the condition of other remote organs.
6. What relation exists between the liver, on the one hand, and the stomach and intestines on the other, in the production of disease in either.
7. What are the causes of anasarca, general and partial?

MIDWIFERY.

Examiner, Professor HARVEY.

1. Describe the anatomical character and relations of the structures of the Uterus below the os uteri internum. Do they constitute a true sphincter? Is there any other apparatus in the human body which this resembles in mechanism and position?
2. Detail the mode of performing the manœuvre of Ballotement. At what period of pregnancy is it available for diagnosis, and what is the nature and amount of the information to be derived from it?
3. In what cases is the Binder particularly useful during labour? Describe minutely the mode of applying it both during and after labour. How is the pad best managed with a view to checking post-partum hemorrhage?
4. What is the real nature of "Spontaneous Evolution of the foetus" as described by Denman, and of the "Spontaneous Expulsion" of Douglas? Detail the process of the labour in each form.
5. A woman is in labour: the membranes have just given way, and the shoulder presents. Os uteri very little dilated. Describe minutely your management of the case.
6. Give an outline description of the Cephalotribe, and detail the mode of operating with it. To what extent of pelvic deformity is it available for saving the necessity of resorting to the Caesarian section? In what respects does Kidd's Cephalotribe differ from those of Simpson and Braxton Hicks?

MEDICAL JURISPRUDENCE.

Examiner, Professor O'KEEFE.

1. How would you apply the hydrostatic test? What is its value in a medico-legal inquiry?
2. How distinguish between a burn produced during life from one caused after death?
3. What are the most usual appearances found on the body of a man drowned?
4. Post-mortem rigidity—its average time of on-coming and departure?

5. A case occurred within the past few days, where a medical man stated that he could not identify the sex of a child whose body had lain in the water for about a month. Criticise the medical evidence in this case so far as regards the sex. Appendix D.
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Examina-
tions.

6. What are the symptoms of chronic lead poisoning? How would you proceed to search for the presence of lead in an organic mixture?

7. What are the ordinary symptoms of slow mercurial poisoning? How would you proceed to detect the presence of mercury in the vomited matters, or in the contents of the stomach?

SESSIONAL AND PRIZE EXAMINATIONS.

ANATOMY AND PHYSIOLOGY.

Examiner, Professor CHARLES, M.D.

Sessional
and Prize
Examina-
tions.

[In addition to the oral class examinations and the questions 1 and 2 (to which written answers were given by every member of the class after the Christmas recess) First Year Students are required to attempt questions 3, 4, 5, 6, 7, 8 and 14; Second Year Students 3, 6, 7, 8, 9, 10, 11 and 14; Third and Fourth Year Students 7, 8, 9, 10, 11, 12, 13, and 14.]

3. Give a concise account of the properties and method of preparation of syntonin, glycogen, muscle-plasma, hemoglobin, and bilin.

4. Describe the microscopical characters of (1) a nail, (2) a sebaceous gland, (3) a Pacinian body, and (4) a muscular fibre of the heart.

5. Where does ciliated epithelium occur in the human body? Give an account of ciliary motion, and state the influence of (1) electricity, (2) acids, (3) alkalies, (4) bile, (5) blood, and (6) temperature, upon its intensity and its duration.

6. Give a concise description of the physical process by which food is absorbed from the intestines. What substances are usually absorbed by the lacteals? Mention the different agencies which produce the movement of the chyle, and the changes which take place in this fluid as it flows onwards.

7. Give a short account of the comparative anatomy of the alimentary canal.

8. Describe carefully the changes which take place in the air in respiration, and the process or processes by which the entrance of oxygen into the blood and the exit of carbonic acid from it are effected.

9. Supply the following:—(1) the latent period of striated muscle, (2) the velocity of the nervous impulse, (3) the mean blood pressure in the aorta, (4) the velocity of the blood in the systemic capillaries, (5) the speed of transmission of the pulse wave, (6) the time required by the blood to make a complete circuit of the body, (7) the capacity of the left ventricle, (8) the frequency of the pulse before birth, at birth, in children, adolescence, and old age, (9) the average amount of urea excreted in the urine of an adult every 24 hours, and (10) the average amount of carbon exhaled from the lungs of an adult every 24 hours in the form of carbonic acid.

10. Give diagrams of (1) the "muscle-curve"; (2) the tracing of arterial blood pressure (a) in health, and (b) during cardiac inhibition; (3) the sphygmographic tracing of the pulse when (a) vigorous and strong, (b) deficient in tone, (c) dicrotic, and (d) hyperdicrotic; (4) Traube's curves. Draw diagrams also of the *microscopical appearances*

Appendix D. of (5) the pancreas taken from an animal (a) killed after prolonged fasting and (b) during digestion; (6) the nodes of Ranvier; (7) a lobule of the liver; (8) a ganglion cell of a frog showing the origin of a nerve (according to Beale); (9) the tonsil; (10) a gland of Brunner; and (11) a peptic gastric gland.

Sectional
and Price
Examinations.

11. What are the functions of the vaso-motor centre in the medulla oblongata? How have its dimensions been determined? Mention the facts from which the existence of local vaso-motor centres has been inferred. What is Goltz's theory regarding the peripheral mechanism?

12. Give a concise account of the theory of the localization of functions in the cortex of the brain, mentioning the situation of the principal areas described by Ferrier. Tabulate all the evidence for and against this theory.

13. State, in a tabular form, the corresponding parts of the genito-urinary organs in the male and female, and their relations to the formative rudiments of the common embryonic type, arranging them under the heads of (1) Reproductive glands, (2) Wolffian bodies, (3) Wolffian ducts, (4) Müllerian ducts, (5) Genital cord and Sinus urogenitalis, and (6) External organs. Furnish illustrative diagrams.

14. Name the specimens under the microscopes numbered 1-8, and the moist preparations, numbered 9-16.

1. A. State Schmidt's theory of the coagulation of the blood, and give a concise account of all the evidence on which it is based. [All the experiments shown in the class to illustrate this theory are to be carefully described.] B. Why, according to Schmidt, does blood coagulate after death? Mention the objections which may be urged against his view.

2. Describe the microscopical characters of the different varieties of cartilage, and explain how wounds in this tissue are healed.

PRACTICAL ANATOMY.

Examiner, PROFESSOR CHARLES, M.D.

[In addition to making a Dissection for three hours, First Year Students are required to answer questions 1, 3, 4, 5, and 8; Second Year Students, 1, 3, 5, 6, and 8; Third and Fourth Year Students, 2, 7, 9, 10, and 11.]

1. Give a minute description of—1, the spheno-maxillary fossa; 2, the transverse processes of the twelfth dorsal vertebra; 3, the tubercosity of the ischium; 4, the inner wall of the orbit; and, 5, the scaphoid of the hand.

2. Describe the ossification of the pelvis and the temporal bone.

3. Give a detailed account of the attachments, relations, and use of each of the ligaments connected with the first rib, the astragalus, and the trapezium respectively.

4. Give the attachments and relations of the quadratus lumborum and the longissimus dorsi.

5. Describe briefly all the branches of arteries which supply the diaphragm and the parietes of the abdomen (excluding the pelvis).

6. Give the exact attachments, relations, and nervous supply of the adductor magnus, scalenus medius, and levator ani.

7. Describe the principal abnormalities of the thoracic aorta, and show

how most of them can be accounted for by a reference to fetal develop- *Appendix D.*
ment.

8. Give a careful description of the external characters, relations, dimensions, and naked-eye structure of the pancreas, bronchi, and uterus.

Sessional
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Examina-
tions.

9. Describe minutely the Eustachian tube and the male urethra—their relations, dimensions, vascular supply, as well as the muscles which act on each. State also how you would expose them for demonstration.

10. Give the superficial and the deep origin of the fourth, fifth, and seventh (Willis) cranial nerves. Describe in detail, also, the cardiac, pelvic, and cavernous plexuses, and the method of exposing each.

11. Describe concisely the successive steps of the dissection necessary to bring completely into view every part of the brain. No description of the parts required.

MATERIA MEDICA AND THERAPEUTICS.

Examiner, Professor O'KEEFE.

1. In what several ways do Cathartics act? How would you classify medicines of this order? Name the most important in each group. Give three prescriptions illustrative of the mode of exhibition of Aloes, Sulphate of Magnesia, and Elaterium respectively.

2. Tartar Emetic.—Give its chemical characters and Therapeutic uses. What conditions indicate and contra-indicate the exhibition of this drug?

3. Contrast the mode of action of a narcotic with that of a stimulant and a sedative respectively, and name the most useful drugs grouped under each of these three divisions.

4. What are the Enemata of the B.P.? How would you prepare Enema Asafoetidae, Enema Magnesia sulphatis, and Enema opii?

5. Santoninum.—Give its source, preparation, physiological and therapeutical actions, mode of administration.

6. Name some of the most important medicines whose therapeutic action is referred principally to the spinal chord, with indications for the exhibition of any two, and modes of their administration.

7. Iodoform.—Its characters, preparations, and uses.

8. What is the average dose for an adult of each of the undernamed?—Pulv. opii, Morph. murias, Phosphorus, Acid. Nit. Hyd. dil. Tinctura Aconiti, Ext. Colchici, Strychnia, Liq. Arsenic. hydrochloricus, Ferri et Quiniae citras, Hyd. perchloridum, Ol. crotonis, Pot. bromidum.

9. What are the constituents of the undernamed B.P. preparations?—Tre. Camph. co., Ung. Iodi, Sp. Ammon. Aromaticus, Mist. Cretæ, Pil. Hyd. subchloridum, Cataplasma Carbonis, Confect. Sulphuris, Pulv. Ipecac. co.

10. How do disinfectants act? Name the most important, taking the term in its widest sense. How estimate the amount of Chlorine in a given weight of bleaching powder.

11. Explain the method of applying (therapeutically) the different forms of Electricity, and give the most important indications for each.

ORAL EXAMINATION.

Appendix D.

Sectional
and Prize
Examina-
tions.

PRACTICE OF MEDICINE.

Examiner, Professor O'CONNOR.

1. Make a classification of fevers ?
1. How would you investigate a case of supposed fever ?
3. State the causes of the aggravation of symptoms in the progress of a continued fever.
4. State the periods of life in which cerebral diseases are most common, and an explanation of the cause or causes.
5. What is Fibroid Phthisis, its causation and synonyms.
6. What is the nature and cause of Emboli and Thrombi ?
7. What effect has adherence of the Pericardium on the structure of the heart ?
8. What are the causes of Hæmoptœ ?
9. How would you distinguish between pleuritic effusion and chronic solidification of the lung ?
10. Explain the nature and cause of cirrhosis of the liver ?

SURGERY.

Examiner, Professor TANNER.

1. Describe the changes which characterize the blastema of an inflamed part.
2. What are the different forms of ulceration and different kinds of ulcers ?
3. Describe Erysipelas pathologically, and in what it differs from diffuse inflammation.
4. What are the different methods by which the healing of open or incised wounds may be accomplished ? Fully explain each.
5. What are the different poisoned wounds ; how derived ; and the consequences of each ?
6. What are the several ways by which Hæmorrhage may be arrested ?
7. What signs and symptoms would predispose you to prefer either Symes', Chopart's, or Perigoff's amputation of the foot in traumatic injury to, or disease of the tarsal bones ? And describe accurately any of these operations.
8. A man while riding, in jumping his horse off a ditch, gets thrown violently against the pommel of the saddle and ruptures his urethra. Give the signs, sequelæ, and treatment you would adopt under the circumstances.

MIDWIFERY.

Examiner, Professor HARVEY.

1. Describe in detail the peculiarities of the ovately deformed pelvis. Where does the difficulty in labour with this form exist ; and what are the means of relief ?
2. What structure in the pelvis chiefly determines or causes the rotation of the child's head in the progress of a natural labour ?
3. What is a corpus luteum ? Describe its mode of formation, growth and disappearance. How many modifications of the structure are there ; and how do they differ ?
4. Give a descriptive detail of the physiological actions which are brought into play in the processes of the dilatation of the mouth of the womb, and of the expulsion of its contents, in a natural labour.

5. What is understood by "Superfoetation"? Mention the principal reasons which are adduced to show that it may occur; and those to show that it cannot. Give your opinion on the state of the question.

6. Under what circumstances is the child born with face to pubis? Describe the course which the head takes; and the character of the labour in this case.

7. A woman at, or near term, has had severe pains for several hours, and an examination is made which may reveal the fact that true labour is not present; what are the points that would show that it is not?

8. What are the qualities requisite to constitute a really good forceps? Mention some of the best at present in use; and the points in which they excel.

9. A woman near her confinement is supposed to be pregnant of twins. Give your mode of examining the case; and the points of diagnosis.

10. A woman is in labour of her third child, her previous labours having been natural: the cord has prolapsed, but is still pulsating; how would you manage the case? What would be your treatment if the cord was cold, and all pulsation had ceased for the last hour?

MEDICAL JURISPRUDENCE.

MEDICAL PART.

Examiner, Professor O'KEEFE.

1. The normal period of human gestation varies within certain limits. What are they? On what does this variation appear to depend?

2. How would you proceed to apply the hydrostatic test? What is the value of the results derived from this test as evidence in a charge of infanticide?

3. What appearances—external and internal—may be presented in the body of a person found drowned? How may these appearances be availed of in determining the length of time the body has lain in the water?

4. What is meant by the term, "late putrescence"? To what extent may the appearances presented be availed of in determining the probable time of death.

5. Contrast the characters of the fetus at the termination of the eighth lunar month with those of one that has arrived at the full term of gestation.

6. To what extent may the condition of certain foetal structures be applied to the determination of the age of a recently born child whose body has been found dead?

7. What are the most reliable methods of proving that a certain article is stained with blood? Detail accurately the steps to be used in applying each method.

8. Describe the train of symptoms known as ergotism. How would you detect the presence of ergot in the contents of the stomach?

9. What are the most usual modes by which lead enters the system? Give the symptoms of chronic lead poisoning, and describe how you would proceed to detect lead in organic matter.

10. What are the smallest fatal doses of strychnia, corrosive sublimate, Fowler's solution, Prussic acid (B.P.) oxalic acid, Phosphorus and Tartar emetic respectively.

11. Select any three of these poisons and describe the symptoms produced by each and the methods of detecting their presence in organic matter.

Appendix D.
Seasonal
and Prize
Examina-
tions.

Appendix D.

Sessional
and Prize
Examina-
tions.

LEGAL PART.

Examiner, Professor O'SHAUGHNESSY.

1. With respect to the presumption of death, upon whom does the onus of proving it lie? State the reason for the rule.

In case of absence, when does the presumption of the continuance of life cease?

When may such cases be elucidated by medical evidence?

2. In cases of survivorship, where parties have perished by a common calamity, what would seem to be the true conclusion as to the law of England?

3. In cases of wounds criminally inflicted, what is the duty of a medical witness as to the evidence he should be prepared to give when several apparent causes of death exist? State the reason.

4. What may be taken as a general rule as to the validity of civil contracts entered into by lunatics?

5. When a medical man signs his name as a witness to a Will, what professional responsibility does it involve?

What would be a prudent precaution, particularly in cases of senile imbecility?

University and Special Prizes.

UNIVERSITY PRIZES IN GEOMETRY.

(See paper set for these Prizes, App. D., Science Scholarships of First Year, Mathematics, First Paper, p. 80.)

UNIVERSITY PRIZES IN ENGLISH COMPOSITION.

Examiner, Professor ARMSTRONG.

SUBJECT FOR ESSAY:

COLLEGE PRIZES IN ANCIENT HISTORY.

Examiners, Professor BOULGER and Professor LEWIS.

HERODOTUS.

Professor BOULGER.

1. What is the leading design of the History of Hérodotos? Make an *épitome* of its contents, and show how the various digressions are connected with that design.

2. Give an account of Egypt, as described by Hérodotos, with special attention to the following points:—

- a. Extent of territory:
- b. The Nile—its sources, course, and overflow:
- c. Peculiar customs of the inhabitants:
- d. Religion:
- e. Successive dynasties from Ménès to Amasis.

3. Draw a map of Africa, and mark thereupon the districts with which Hérodotos seems to have been acquainted. Give a description, drawn from his narrative, of any African nation except the Egyptians.

Univer-
sity and
Special
Prize
Examina-
tions.

4. What were the circumstances attending the elevation of Darius, *Appendix D.*
son of Hystaspès, to the throne of Persia?

Give the names and extent of ten of the twenty satrapies instituted by him. *Early English Text Society's Prizes.*

Who were the first Persians, according to Hérodotos, to visit Hellas, and what was the object of their mission?

5. Write out a full account of the expedition of Datis and Artaphernès, B.C. 492.

Describe the route taken by Xerxès in his march from Sardis to Thermopylai.

With what event does the History of Hérodotos conclude?

Candidates selected any three of the five questions.

Professor LEWIS.

1. Mention some proofs of the corruption of manners at Rome caused by conquest in the East.

2. Draw the character of Mithridates.

3. Describe the commercial relations between the Romans and the north of Europe. From what sources is our knowledge of this subject derived?

4. Name the principal Latin authors who flourished in the Silver Age, and give the titles of their works.

5. Write a chronological list of the emperors from Augustus to Septimius Severus.

1. What were the Licinian Rogations?

2. Relate the war with Pyrrhus.

3. Draw the character of Pompey the Great.

4. Give an account of the conquests of Trajan. From what sources do we derive our knowledge of his reign?

5. Where were the Prætorian camps situated?

The Early English Text Society's Prizes.

Examiner, Professor ARMSTRONG.

1. Describe the distribution of the Jutes, Saxons, and Angles over the soil of Britain.

2. Give an account of the educational reforms ascribed to King Alfred.

3. Describe the relations existing between Normandy and England prior to the Conquest.

4. Write a brief narrative of the struggle between Henry I. and Robert of Normandy, and the latter's partisans.

5. Relate the story of Strongbow's invasion.

6. What are the principal distinctions between Anglo-Saxon and Modern English?

7. Write out the moods and tenses of the verb *writean* and *scotian*.

8. Write a brief historical sketch of the literature of England from the Norman Conquest to the death of Chaucer.

9. Give an account of the characters described in the *Prologue* to the *Canterbury Tales*.

10. Describe the foreign relations of England during the lifetime of Chaucer.

Appendix D.
New
Shakspeare
Society's
Prizes.

11. Make a metrical analysis of the following passage, explaining the metrical and grammatical rules which guide you; and paraphrase the passage in modern English prose:—

"And which of you that bereth him best of alle,
That is to seyn, that telleth in this cas
Tales of best sentence and most soles,
Shal han a soper at youre alther cost
Here in this place sittynge by this post
Whan that we come agayn from Canterbury."

12. What are the sources of the following words, and at what periods respectively do they appear to have been introduced into the language:—*Lord; suzerain; church; martyr; foss; tarn; glen.*

New Shakspeare Society's Prizes.

Examiner, PROFESSOR ARMSTRONG.

1. What is Voltaire's theory of the origin of the Mysteries?
2. State what you know of *Gerbodue*.
3. Give a critical account of Drayton's works.
4. Name the principal minor lyrical poets of the Elizabethan Age.
5. Criticise the comic element in *Henry V.*
6. Describe King Henry V.'s character as represented by Shakspeare.
7. Relate the plot of *As You Like It*.
8. Write a description of the character of Jaques.
9. Coleridge says,—"Othello does not kill Desdemona in jealousy, but in a conviction forced upon him by the almost superhuman art of Iago, such a conviction as any man would and must have entertained who had believed Iago's honesty as Othello did."—Examine this criticism by the light of the play.
10. Criticise the remark of Coleridge, that Iago's is a "passionless character."
11. Describe in their succession the incidents employed by Shakspeare for the development of Timon's idiosyncrasies.
12. Name the writers of the following plays:—*The Postaster; Friar Bacon and Friar Bungay; The Arraignment of Paris; The Two Noble Kinsmen; The Virgin Martyr; The Fatal Dowry; The Lover's Melancholy; The Maid's Tragedy.*

APPENDIX E.

No. XV.

DONATIONS to LIBRARY, MUSEUMS, and BOTANIC GARDEN.

Library.

CATALOGUE of the SECOND GIFT of WILLIAM H. CRAWFORD, of
LAKELANDS, ESQ.

- Antonio, Nic., *Bibliotheca Hispana vetus*. 2 vols. Folio, bound in one.
Matriti, 1788.
- „ *Bibliotheca Hispana nova*. 2 vols. Folio.
Matriti, 1783-88.
- Assemani (Jos.-Sim.), *Bibliotheca Orientalis Clementino-Vaticana*.
Recensuit, &c.
4 vols. Folio. Romæ, 1719-28.
- „ (Steph.-Evd.), *Catalogus codicum MSS. orientalium bibliothecæ Medicæ Laurentianæ et Palatinæ*; curante Ant. Gr. Gorio. 1 vol. Folio. Florentiæ, 1742.
- Bandini (Ang.-Mar.), *Catalogus codicum manuscriptorum Bibl. Med. Laur. Varia continens opéra Græcorum Patrum*, &c. 3 vols. Folio. Florentiæ, 1764-70.
- „ *Catalogus codicum Latinorum Bibliothecæ Medicæ Laurentianæ*, &c. 5 vols. Folio. Florentiæ, 1774-78.
- „ *Bibliotheca Leopoldina Laurentiana seu Cat. Cod. Manuscriptorum*, qui jussu Pedri Leopoldi in Laurentianam translati sunt. 3 vols. Folio. Florentiæ, 1791-93.
- Barlow, Hen. C., M.D., *Crit. Hist. and Phil. contributions to the study of the Divina Comedia*. 1 vol. 8vo. London. (Supplement to 1865. 8vo.)
- Biscionio (Ant.-Mar.), *Bibliothecæ Mediceo-Laurentianæ Catalogus*, ab Ant. Mar. Biscionio S.T.D. 2 vols. Folio. Florentiæ, 1752.
- Bombay, *Historical Account of the Settlement and Possession of*. London, 1781. Bound up with Wellesley's *History of the Marhatta War*. 1 vol. 8vo. London, 1804.
- Byzantine Historiæ Scriptores, &c. Editio Secunda.
23 vols. Folio. Venetiis, 1729-1733.
- Clarac, Le C^{te} F. de., *Musée de sculpture, antique et moderne, ou description historique et graphique du Louvre, et de toutes ses parties des statues, bustes, bas-reliefs, &c. Et de plus de 2,500 statues antiques. Dont cinq cents au moins sont inédites tirées des principaux musées et des diverses collections de l'Europe, &c. Par le C^{te} F. de Clarac*. 6 vols. 8vo., letterpress, and 6 vols. oblong 4to. Plates. Paris, 1841-53.
- Clarendon, Earl of, *State Papers collected by the*. 3 vols. Folio.
Oxford, 1763

Appendix E.
Donations
to Library,
Museums,
&c.

- Appendix E*
 Donations
 to Library,
 Museums,
 &c.
- Collectio Pisarenensis omnium poematum, Carminum fragmentorum Latinorum, sive ad Christianos, sive ad ethnicos, sive ad certos, sive ad incertos poetas. 6 vols. 4to. Pisaure, 1766.
- Deguignes, M., Histoire Générale des Huns, des Turcs, des Mogols, et des autres peuples tartares occidentaux, &c., avant et depuis Jésus-Christ jusqu'à présent. Par M. Deguignes, &c. Suite des mem. de L'Acad. Roy. des Inscip., &c. 4 tom. in 5 vols. 4to. Paris, 1756-58.
- Diplomatique, Nouveau Traité de, par deux religieux Bénédictins (D. Ch.-Fr. Toussaint et D. Tassin). 6 vols. 4to. Paris, 1750-1765.
- Domesday Book, or the great Survey of England of William the Conqueror, A.D. MLXXXVI. Photo-Zincographed by Her Maj. command at the Ord. Survey Office, Southampton, by Col. Sir H. James, R.E., F.R.S. 84 vols. 4to.
- Du Cange (Carol. Dufresne, dom.), Glossarium Mediæ et Infimæ Latinitatis, conditum a Car. Dufresne Dom. Ducange auctum a monachis ordinis sancti Benedicti cum supplementis integris D. P. Carpenterii, &c., digessit G. A. L. Henschel. 7 vols. 4to. Parisiis (Didot), 1840-48.
- " Glossarium ad Scriptores Mediæ et Infimæ Græcitatatis, cum Appendix. 2 vols. Folio, bound in one. Lugduni, 1688.
- Eckard or Eckhard, J. Georg., Corpus Historicum Mediæ ævi, sive Scriptores, Res in orbe universo, præcipue in Germania, enarrantes aut illustrantes a temp. Caroli Magni usque ad finem sæculi xv. 2 vols. Folio. Lipsie, 1723.
- Facsimiles of National Manuscripts from William the Conqueror to Queen Anne. Photozincographed by Col. Sir Henry James. 4 vols. 4to. Southampton, 1865-68.
- " of National Manuscripts of Scotland. Photozincographed by Col. Sir H. James. 2 parts. 4to. Southampton, 1867-70.
- Gori, Ant. Fr., Thesaurus veterum diptychorum consularium et ecclesiasticorum; accessere J. B. Passeri additamenta. 3 vols. Gr. in folio. Florentiæ, 1759.
- Halliwel, J. O., The Works of William Shakespeare. The text formed from a new collection of the early editions, &c., by James O. Halliwel, Esq., F.A.S. The illustrations, &c., by F. W. Fairholt, F.S.A. 16 vols. Folio. 150 copies printed. London, 1853-65.
- " A Descriptive Catalogue of the Ancient Manuscripts and Records of Stratford-upon-Avon, including Notices of Shakespeare and his Family. 1 vol. Folio. (75 copies printed.) London, 1863.
- " An Historical Account of the New Place, Stratford-upon-Avon, the last residence of Shakespeare. 1 vol. Folio. London, 1864.
- Historical Society, Publications of the English. 29 vols. 8vo. London, 1838-56.
- Adami Murimanthensis Chronica (Ed. by Thomas Hog). 1 vol. 8vo. Londini, 1846.
- Bede Venerabilis, Historia Ecclesiastica Gentis Anglorum. 1 vol. 8vo. Londini, 1841.
- " Opera Historica Minora. 1 vol. 8vo. Londini, 1841.
- Florentii Wigorniensis, Chronicon ex Chronicis, 2 vols. 8vo. Londini, 1848.
- Gildas, De Excidio Britannię (Ed. J. Stevenson). 1 vol. 8vo. Londini, 1838.

Historical Society, Publications of the English—continued.

Appendix B.

- Henrici Quinti, Gesta, (Ed. B. Williams). 1 vol. 8vo. Londoni, 1850.
- Kemble, J. M., Codex Diplomaticus Ævi Saxonici. 6 vols. 8vo. Londoni, 1838-1848.
- Nenni, Historia Britonum, (Ed. J. Stevenson). 1 vol. 8vo. Londoni, 1838.
- Ricardi Divisiensis, Chronicon de Rebus Gestis Ricardi Primi, Regis Angliæ. 1 vol. 8vo. Londoni, 1838.
- Richard Deux Roy Dengleterre, Chronique de la Traison et Mort de (Ed. B. Williams). 1 vol. 8vo. Londres, 1846.
- Roger de Wendover, Chronica, sive Flores Historiarum. Edidit H. O. Coxe. 4 vols. 8vo. Londoni, 1841-42.
- " Appendix ad. 1 vol. 8vo. Londoni, 1844.
- Stephani Regis Anglorum, Gesta. (Ed. R. C. Sewall). 1 vol. 8vo. Londoni, 1846.
- Trivet, F. N., Annales. (Ed. Thos. Hog). 1 vol. 8vo. Londoni, 1845.
- Walteri de Hemingburgh, Chronicon. 2 vols. 8vo. Londoni, 1848.
- Willelmi Malmesbiriensis, Gesta Regum Anglorum atque Historia Novella. 2 vols. 8vo. Londoni, 1840.
- Willelmi Parvi de Newburgh, Historia Rerum Anglicarum. 2 vols. 8vo. Londoni, 1848.
- Horatius Flaccus (Quintus). Quincti Horatii Flacci, Venusini, Poetæ Lyrici elegantiss. Opera, Grammaticorum XL., tam antiquiss. quam neotericorum partim justis commentariis, partim succinctis annotationibus illustrata, &c. Basileæ per Sebastianum Henrici-petri [1580]. Folio.
- Horticultural Society of London, Journal of the. 9 vols. 8vo. London, 1846-1855.
- " Proceedings of the, from May 1838 to December, 1843. 1 vol. 8vo. London, 1844.
- India House, Abstracts. A MS. containing entries from the above records from 1641 to 1796 illustrated with several old engravings, portraits, maps, plans, buildings, &c. 4to.
- Kemble, John Mitchell, The Saxons in England. A History of the English Commonwealth till the Norman Conquest. 2 vols. 8vo. London, 1849. (See also Historical Society.)
- Lappenberg, Dr. J. M., A History of England under the Anglo-Saxon Kings. Translated from the German by Benjamin Thorpe. 2 vols. 8vo. London, 1845.
- Lelong, Jacques, Bibliothèque Historique de la France, contenant le catalogue des ouvrages imprimés et manuscrits qui traitent de l'histoire de ce royaume; nouvelle édition, augmentée par Ferret de Fontette. 5 vols. Folio. Paris, 1768-78.
- Ludewig, J. P., Reliquiæ manuscriptorum omnis ævi diplomatum ac monumentorum ineditorum adhuc, ex museo J. P. Ludewig. 12 vols. 8vo. Francofurti et Lipsiæ, 1720-41.
- Mabillon, Dom. Joannis, De re diplomatica Libri VI. 1 vol. Folio. (Large paper) Lutecis Parisiorum, 1709.
- " Librorum de re diplomatica. 1 vol. Folio. (Large paper), Lut. Paris. 1704. (Bound up with the foregoing).
- Montfaucon, Dom. Bern. de, Palæographia Græca, sive de ortu et progressu litterarum Græcarum, &c. 1 vol. Folio. Parisiis, 1708.

Appendix E. Muratori, Lodov. Ant., *Rerum italicarum scriptores præcipue ab anno æræ Christ. D. ad MD, quorum potissima pars nunc primum in lucem prodit; ex Ambrosianis, Estensis et codicibus, Lud. An. Muratorius, collegit, ordinavit et præfationibus auxit.* 25 tomes in 28 vols. Folio. Mediolani, 1723-51.

Muratori, *Rerum Italicarum Scriptores ab anno Christi M. ad MDC, quorum potissima pars primum in lucem prodit.* [Opera Jos. Mar. Tartinii] Florentiæ, 1748-70. 2 vols. Folio. (May be regarded as a supplement to Muratori).

Nugler, Dr. G. K., *Neues allgemeines Künstler-Lexicon, oder Nachrichten von dem Leben und den Werken der Maler, Bildhauer Baumeister, Zeichner, &c.* 22 vols. 8vo. München, 1835-52.

Navarrete, Marten Fernandez de, *Coleccion de viages y descubrimientos que hicieron por mar los Españoles desde fines del Siglo XV., con varios documentos concuenientes a la historia de la marina castellana y de los establecimientos españoles en Indias, coordinada e ilustrada por Don. M. F. de Navarrete.* 5 vols. 4to. Madrid, 1825-29-37.

Pertz, G. H., *Monumenta Germaniæ historica, inde ab anno Christi 500 usque ad annum 1500, auspiciis societatis aperiendis fontibus rerum Germanicarum, mediæ sævi, edidit Geor. Henr. Pertz.* Hanovers, 1826-78. 25 vols. Folio. And six parts unbound, 1 fol., 5 4to.

Placcius, Vinc., *Theatrum anonymorum et pseudonymorum, cum præfat. et vita auctoris Jo. Alb. Fabricii.* 2 tomes in 1 vol. Folio. Hamburgi, 1708.

Pny, Georgii, *Annales veteres Hunnorum, Avarum et Hungarorum ab anno ante nat. Christum 210 ad annum Chr. 997 deducti; partes tres.* - 1 vol. in folio. Vindobonæ, 1761.

„ *Annales regum Hungariæ ab anno Christi 997 usque ad ann. 1564 deducti.* 5 vols. in folio. Vindobonæ, 1763-70.

Ramusio, Giov. Bat., *Delle navigazioni e viaggi raccolti già da.* 3 vols. Small folio. Venezia (vol. 1, 1563; vol. 2, 1574; vol. 3, 1606).

Recueil des historiens des Gaules, et de la France, par Dom. Martin Bouquet, &c. 22 Vols. in folio. Paris, 1738-1865.

Stackius, Joan. Guill., *Operum, tomus primus continens antiquitatum convivialium descrip.; tomus secundus continens sacrorum et sacrificiorum descrip.* 2 tomes in 1 vol. Lug. Bat., 1695.

Vernon, G. G. Warren, Lord, *Le prime quattro edizioni della Divina Commedia letteralmente ristampate.*

1 vol. very large 4to. Londra, 1858 (100 copies printed.)
Walter, Joh. Ludolf, *Lexicon diplomaticum, abbreviaciones syllabarum et vocum in diplomatibus et codicibus a Seculo VIII. ad XVI., usque occurrentes, exponeus, junctis alphabetis et scripturas speciminibus integris.* Studio Joannis Ludolfi Waltheri, cum præfatione Joannis Henrici Jungii. 1 vol. Folio. Sumptibus Gaumianis. Ulmæ, 1745.

Books and Pamphlets presented by FRANK WOODLY, Esq. :-

Ballagi, M., *Taschenwörterbuch, ungarische u. deutsche.* 12mo. Pest. Bericht über Oesterreich's ungünstige Stellung im Welthandel. 8vo. Triest, 1865.

- Catalogue of the Library of Greffier Fagel. 8vo.
- Čupr Franz, Böhmisches Lesebuch. Erster Band. 8vo. Prag, 1852.
- Daly, John, Self Instruction in Irish. 12mo. Dublin, 1846.
- Davies, John, Allwedd Duwinyddineth. 12mo. Caerfyrddin, 1841.
- Dillis, G. von, Verzeichnisse der Gemälde in der königlichen Pinakothek zu München. 12mo. München, 1838.
- Dornizer, Max. und Schebek, Dr. Ed., Die Erwerbsverhältnisse im böhmischen Erzgebirge. 8vo. Prag, 1862.
- Forestier illuminato intorno le cose più rare, e curiose antiche, e moderne della città di Venezia e dell' isole circonvicine. 1 vol. 8vo. Venezia, 1765.
- Fouqué, De la Motte, Romanzen vom Thale Ronceval. 1 vol. 8vo. Berlin, 1805.
- Franzén, Franz, Michael—Esaiss Tegner's Leben. Deutsch von G. Mohrnik. Leipzig, 1840.
- Frölich, R. A., Anleitung zur Erlernung der vier slawischen Haupt-sprachen. 8vo. Wien, 1847.
- Grimm, W., Thierfabeln bei den Meistert Sängern. 4to. Berlin, 1855.
- Grove, P. V., Iylland, Illustreret Reisehaandbog. 12mo. Kiöbenhavn, 1871.
- Halma, F., Dictionnaire flammand et françois. 4to. Amsterdam.
- Heinrich des Löwen, Geschichte des. 12mo. Frankfurt am Main.
- Hickmann, A. L., Industrial Atlas des Königreich's Böhmen. 1 vol. Folio. 1863.
- Hjort, P., Om det Engelske Koujugtions System. 4to. Kiöbenhavn, 1843.
- Hocker, N., Das Moselthal, von Nancy bis Koblenz. 12mo. Leipzig, 1855.
- Hanold, B., Wache Träume, Gedicht (4th Ed.) 12mo. Innsbruck, 1864.
- Janežič, Anton. Popólmi Ročni Slovár. (Slovenic and German Dictionary). Celoveu (Klagenfurt), 1851.
- Karadžić, Vuc Stef., Novi Zavjet Gospoda Nasoga Isara Hrista. 12mo. U Beču, 1864.
- Karlik, H. J., Praktische Grammatik der böhmischen Sprache. (6th Ed.) 8vo. Prag, 1863.
- „ Wörterbuch zur Böhmischen Grammatik. 8vo. Prag, 1859.
- Konečný, J. N., Grammatik der böhmischen Sprache. 4th Ed. 8vo. Wien, 1853.
- Marin, P., Dictionnaire Hollandois et François. 4to. Amsterdam, 1720.
- Mischler, Dr. J. und U. Ph. Pet., Zur Abhilfe des Nothstandes im Erz- und Riesengebirge. 8vo. Prag, 1862.
- Müller, Max., Essai de Mythologie Comparée. 8vo. Paris, 1859.
- Nowy-pana naszago Jesusa Chrystasa Testament. (New Testament in Polish). Berlin, 1866.
- Oesterreichischen Gesetze (Taschenausgabe). Vols. 2, 3, 4, 5, 7, 8, 9, 10, 11. 12mo. Wien, 1862-65.
- Pisting, Theo., Volkswirtschaft und Arbeitspflege im böhmischen Erzgebirge. 12mo. Wien, 1861.
- Public Health Report (Ninth), 1866. 8vo. London, 1867.
- Rabelais, Affentheurlich Raupengeheurliche Geschichtklitterung von Thaten und Rhaten vor kurzen langen unnd je weilen Vollen-wolbeschreiten Helden und Herzen Grandgoscier Gorgellantua und dess dess Eiteldurstlichen Durchdurstlehtigen Fürsten Pentagruel, &c. Gedruckt zur grenflug in Günserrich, 1590. 8vo.
- Report of the Three Days Disoussion in the Dublin Corporation on the Repeal of the Union by John Levy. 8vo. Dublin, 1843.

Appendix K.

Donations
to Library,
Museums,
&c.

Appendix E. Rubše, Frant. Jaromíra, Spisy. 4 vols. (in 3). 12mo.

Donations to Library, Museums, &c. Prace, 1861-62.
Schiller, F., Maria Stuart, Poslovenil France Cegnar (Schiller's Maria Stuart in Slovenic). 1 vol. 12mo.

Culovecu (Klagenfurt), 1861.
Schiller, F., Viljem Tell, Poslovenil France Cegnar (Schiller's Wilhelm Tell in Slovenic). 1 vol. 12mo. Culovecu (Klagenfurt), 1862.

Schulz, P. J., Anfangsgründe der böhmischen Sprache. 8vo. Prag, 1862.

Sokol, Jos., Schule der böhmischen Sprache für Deutsche. Erster Theil. 12mo. Prag, 1863.

Steinhauer, C. L., Kort veiledning i det Ethnographiske Museum. 12mo. Kjöbenhavn, 1860.

Tacitus, Alle de Werken van C. Corn. Tacitus. In't Hollandsch vertaalt door den Heer P. C. Hooft. 1 vol. Folio. Amsterdam, 1704.

Varelius, Olaus, Index linguae veteris scytho-scandicae, sive gothicae ex vetusti aevi monumentis, maximam partem MSS. collectus, opera Olai Rudbeckii. 1 vol. Folio. Upsaliae, 1691.

List of Miscellaneous Gifts :—

Allman, G. J., Greek Geometry from Thales to Euclid. Pamphlet. By the Author.

Anderson's College, Glasgow, Catalogue of the Musical Library of the late Wm. Ewing, Esq., bequeathed to. 1 vol. 8vo. Glasgow. 1878.

By the Managers and Trustees.
Anderson, Mrs. Garrett, Inaugural Address delivered by, London School of Medicine for Women. Oct. 1st, 1877. Pamphlet, three copies.

By the Author.
Antiquary, The Indian. (Bombay). Received regularly. By the Secretary of State for India.

Appendix to the Report of Head Master's Committee, 1877, Answers to Questions on Natural Sciences.

By the Rev. Dr. Creswell, High School, Dublin.
Army Medical Organisation, A Comparative Examination of the Regimental and Departmental Systems, by Surgeon-Major G. J. H. Evatt. 2nd edition. Pamphlet. Allahabad. 1877.

By the Author.
Belfast Philosophical Society, Proceedings of Session 1876-77. 8vo. Belfast. 1877.

By the Society.

British Museum Publications :—

Catalogue of Oriental Coins. Vol. III. 8vo. London. 1877.

Catalogue of Greek Coins (Thrace), by R. S. Poole. 8vo. London. 1877.

Catalogue of Prints and Drawings. Vol. III. Parts 1-2. (1734-1760.) 8vo. London. 1877.

Catalogue of Birds. Vol. III. By R. Bowdler Sharpe. 8vo. London. 1877.

Catalogue of Additions to the Manuscripts in the. Vol. II (1854 to 1875).

Catalogue of the Chiroptera in the collection of the British Museum. 1 vol. 8vo. London. 1878.

Catalogue of Ethiopic Manuscripts in the British Museum acquired since the year 1847. By W. Wright. 1 vol. 4to. 1877.

A Guide to the Exhibition Rooms of the Departments of Natural History and Antiquities. 1 vol. 1878.

British Museum Publications—continued.

Appendix E.

A Guide to the Second Vase Room in the Department of Greek and Roman Antiquities. Parts 1 and 2. 1878.

Donations
to Library,
Museums,
&c.

Facsimiles of Ancient Charters. Part III. Folio. London. 1877. By the Trustees.

Cambridge Philosophical Society:—

Transactions of. Vol. XI. Part I. Vol. XII. Parts I and II.

Proceedings of. Vol. III. Parts I and II. By the Society

Canadian Journal, The, of Science, Literature and History. Received regularly. By the Canadian Institute.

Catalogue of the Special Loan Collection of Scientific Apparatus at the South Kensington Museum. 3rd edition. 8vo. London. 1877.

Chemist and Druggist, The. (London.) Received regularly. By the Science and Art Department.

China, Medical Reports. (Shanghai.) Received regularly. By the Editor.

Civil Engineers, Minutes and Proceedings of the Institute of. Vols. XLIX., L., LI., LII. By the Institution of Civil Engineers.

Chronological Table and Index of Statutes. 1235-1877. 8vo. By the Council of Law Reporting.

Eeles, Henry, Philosophical Essays. 8vo. Dublin. 1771. By Professor England.

Fitzgerald, R. D., Australian Orchids. Part III. Folio. Sydney. By the Superintendent of Chinese Maritime Customs.

Hayden, F. V. Geological Survey of the U. S. America. Vol. XI. 4to. Washington. 1877. By the Government of New South Wales.

" Bulletin of the United States Geological and Geographical Survey. Vol. III. No. 4. 8vo. Washington. 1877. By F. V. Hayden, United States Geologist.

Hoare, Capt. Ed., Papers and Communications by. By the Author.

India, Geological Survey of, Records of the. Vol. X. Parts 3-4. Palæontologia Indica. Series II.—3. IV.—2.

" X.—3. XI.—2. By His Excellency the Governor-General of India, through Henry B. Medlicott, esq., Superintendent of the Geological Survey of India.

Jones, H. Mac Naughton, M.D., Spinal Curvatures, Treated by Suspension and Cairass. 2 copies. Pamphlet. Dublin. 1877.

" Aural Surgery. 8vo. London. 1878.

" Clinical Teaching in Hospitals. 2 copies. Pamphlet.

Journal de l'Instruction publique. Province of Quebec, and

Journal of Education. Province of Quebec. Received regularly. By the Minister of Public Instruction.

Lincei, Atti della R. Accademia dei. Received regularly. By the Accademia dei Lincei.

London Science Class Books. Edited by G. C. Foster, F.R.S., and P. Magnus, B.A. and B.Sc.

(1.) Astronomy, by Professor Ball.

(2.) Thermodynamics, by Richard Wormell.

(3.) Zoology of the Vertebrata and Invertebrata, by A. Macalister. 2 vols.

(4.) Botany. 2 vols. By W. R. M'Nab. 12mo. London. 1878. By the Publishers.

Medical News, The (Philadelphia). Received regularly. By the Publisher.

Middlesex Hospital, Reports of the Medical and Surgical Registrars for the year 1875. 1 vol. 8vo. London. 1877.

By Drs. Humphreys and Lyell, the Registrars.

- Appendix.* Norreys, Sir Denham, Bart., A Paper on Kiltarton Church, near Gort.
 Read at a Meeting of the Royal Archaeological Institute, in July.
 Donations to Library, 1876. Pamphlet.
 Museums, " Observations on the Mode of Constructing a Remarkable Celtic
 &c. " Trumpet in the Museum of the R. I. Academy. Pamphlet.
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Museums.

NATURAL HISTORY MUSEUM.

- 355 Specimens of Birds shot wild in the South of Ireland, representing
 175 Species, at about 100 genera or subgenera.
 A Cabinet containing Specimens of the Eggs of Species of Native
 Birds.
 11 Specimens of Irish Mammals.
 A few Specimens of Fish.
 Presented by Joshua R. Harvey, B.A., M.D.
 Specimens of Auriferous Quartz picked up by Alexander Hunter, Esq.,
 Ligar-street, Ballarat, Victoria, from the road "Metal" before his
 own dwelling. Presented by Wm. Millar, Esq.,
 Elsternwick, Melbourne.